THE NEW YORK
JOURNAL OF MEDICINE

FOR SEPTEMBER, 1858.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Description of a new Midwifery Forceps, having a Sliding Pivot to prevent compression of the Fœtal Head (with cases.)* By GEORGE T. ELLIOT, Jr., M.D., Physician to Bellevue Hospital; the Nursery and Child's Hospital; and the Lying-in Asylum; Corresponding Member of the Edinburgh Obstetrical Society. Formerly six months Interne of the Dublin Lying-in Hospital, and two years Resident Physician of the N. Y. Lying-in Asylum.

THE man who offers a new Obstetric Forceps to the profession, must be prepared to prove that he has not done so hastily, and that he can present reasons which are at least satisfactory to his own mind; while there is nothing so comforting to a large number of professional men as the frank confession that nothing on the score of originality is claimed.

I believe that the essential elements of the midwifery forceps, for all time, were discovered by the well-known accoucheurs whose names have become identified with the instrument; but that its benefits have been greatly extended by improved cutlery, and its adaptation to increased uses with diminished risk.

Nor do I believe that the ultimatum in this direction has yet been reached.

Moreover, the various modifications in the history of the instrument are unknown to the mass of the profession, while many of them are unattainable; and the choice of physicians is further limited by the fact that eminent men so modify practice in their respective cities, as to give you certain kinds of instruments, well made in one city, and the reverse in another;

hence an instrument may be introduced with advantage in one city, while it would be superfluous in another.

Again, there are gentlemen who would desire to procure, or cause to be made, an instrument that they had seen serviceable in the hands of a friend or instructor, and have a right to the opportunity of satisfying their wishes. And instrument makers furnish better instruments when the professional man, responsible for the model, can personally supervise them.

Nor, in my judgment, can the need of an Obstetrician be satisfied with one instrument, let it be made never so nicely; for the greater the degree of perfection, which it attains in one direction, the stronger the necessity that it lack some elements of perfection in another.

And the most that can be expected of an instrument is, that it successfully meets very numerous indications. I believe—

1. That the principal use of the forceps, in the immense majority of cases, is that of a tractor alone; and that compression is always in some degree injurious, and to be avoided if possible.

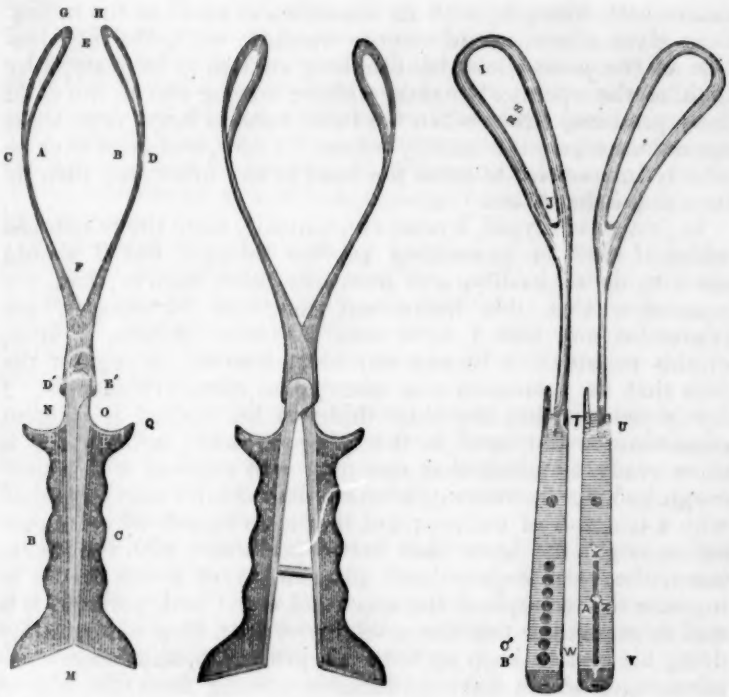
2. That this traction can be applied, and should be applied, by competent men, in well selected cases, even though the head so float above the brim as to be only capable of being steadied by the hand, introduced above the pelvic brim; and that thus the class of forceps, known as short forceps, would not in these cases meet the full requirements of the art.

3. That this traction can be applied, and should be applied by competent men, in well selected cases, through an os uteri, as yet barely dilated sufficiently to admit the blades separately, and that delivery may subsequently be effected by dilating, or lacerating, or incising the os and cervix uteri; and that in many of these cases, the neglect of this procedure entails loss of fœtal life, demands the perforator, or perils the mother's life by delay, based on ignorance of the full capabilities of the instrument.

4. I believe in the existence of a large class of cases, in which a light and slender forceps can simplify delivery by altering the position of the head—a procedure inoperative and injurious, when performed with instruments of large pelvic curve—while its neglect frequently demands the perforator, or makes the difference between a safe operation, or one of the greatest risk, to one or both of the lives at stake.

5. That a forceps, capable of fulfilling all these requisitions, must, of necessity, be well adapted to those simpler cases, to which some men would limit their use, rendering them in the words of Dewees, "scarcely subservient to the art."

Thus the forceps now presented is made as light as is con-



Whole length of forceps			15¼ inches.
A to B	2 1/16	inches,	face of forceps.
C " D	2⅞	"	back of "
E " F	6¾	"	
G " H	¾	"	
I " J	4¾	"	
K " L	1⅞	"	
L " M	6¾	"	
N " O	⅝	"	
P " Q	1⅛	"	
R " S	13/16	"	centre of fenestra.
T " U	⅛	"	
V " W	⅛	"	
X " Y	2⅜	"	
Z " A′	⅛	"	
B " C	1½	"	
Length of pin	⅞	"	

Thickness of blade R S ¼th of an inch, a little thinner at the end.

N. B.—B′. This hole is sufficiently deep and wide to receive the entire pivot when it is not needed.

C′ is a little deeper than those above, so that the distance between the handles may be nicely graduated by the pivot.

D′ to E′. These overhanging projections serve to prevent any risk from slipping of the lock when the handles are widely separated.

sistent with strength, with its diameters as small as the indications given above, would seem to warrant; while the introduction of the *pivot* allows handles long enough to be grasped by both of the operator's hands, without fearing risk to the child from pressure, either when the fœtal head is large, or in those operations where it is utterly impossible now, and must ever be utterly impossible, to seize the head in any other way than by its oblique diameters.

In justice to myself, I must emphatically state the reluctance which I feel in presenting another forceps, lest I should seem to do so hastily, and from any other motive than the conviction that this instrument combines advantages, not offered in any that I have seen in Great Britain, France, or this country; or in any way be understood to suggest the idea that its possession was essential to operative success. I firmly believe that the chief thing to be desired is diligent education of the hand in the lying-in room; and no one is more ready to admit that one may well succeed with a very rough looking instrument, where a less skillful man has failed with a triumph of cutlery; but that is no reason why the operation might not have been better performed with the instrument, the very elegance and adaptability of which serves to increase the triumph of the successful man: and, perhaps, it is well to remember that the much injured Dr. Slop was certainly doing his best to keep up with his profession, and foresaw the advantages which have undeniably sprung from the use of forceps in competent hands.

The great difficulties that operative surgery, in all its branches, has to struggle with, is the manner in which the half educated and the uneducated blindly undertake, what they are incompetent to perform; and it is my earnest hope that in the hands of the inexperienced the slender, light, and yet powerful tractor here presented, may be used for the advantage of the patients, with diminution of some of the attendant risks.

That it has not been hastily decided upon, may be inferred from the fact, that since 1849, when I entered the Dublin Lying-in Hospital, my attention has been steadily directed to the development of unusual hospital and other opportunities; and during this time have repeatedly listened to the arguments of different men in favor of dissimilar instruments, which I have seen them skillfully apply, all the while sedulously guarding myself against the use of one especial instrument; owning ten different pairs, nearly all of which I have applied, besides using several pairs belonging to my friends (not to mention two applications of Simpson's Air-Tractor); replying steadily to my friends among students and physicians, in con-

versation and by letter, that one pair alone could not meet all contingencies, and that no one satisfied me entirely.

Gradually, however, Simpson's forceps became more and more my favorite instrument, and I have twice succeeded in applying them when a remarkably competent man had failed, from selecting an instrument with larger blades; and the advantages claimed for the subject of this article are:

1st. Absence of risk of compressing the fœtal head procured by the pivot.

2d. Greater opportunities for tractive effort, from the very absence of this risk; from the consequent lengthening of the handles; broader transverse bars—diminished spaces between points of blades—slightly diminished width of blades, and diminution of fenestra that increased strength might qaulify diminished thickness.

And if the principle of the pivot should give the satisfaction to others that it has given to those who have witnessed the cases hereafter to be narrated, it is well to remember that it can be readily introduced in any instrument for which an obstetrician may entertain any predilection.

I have always been accustomed to place a towel between the handles of my forceps when they would not come together, and have lost valuable time in replacing it and adapting it to changes in the mechanism of labor, which need not be lost with this pivot, as one finger moves it so readily.

Moreover, I believe that its presence is a constant reminder to the inexperienced operator of a danger to be avoided, and that one risk being thus certainly removed, he can proceed more confidently to his main purpose—the delivery of the child with safety to the mother.

The arguments glanced at in this article were developed at length in a course of lectures on Operative Midwifery, in Bellevue Hospital, last winter, when Mr. Ford, of the firm of Goulding & Ford, 85 Fulton street, offered to make these forceps for me, and after several modifications from suggestions derived from trial of the instrument at the bed-side, succeeded in making this, which has been used in the following cases, to my satisfaction.

The following are notes of all the cases in which I have used the instrument in the presence of professional men, having been in no way culled for publication. Those in Bellevue having generally been witnessed by the greater part of the house staff, and other physicians; while their examination will serve to show the character of the tests applied, offering, as they chance to do, examples of the most difficult applications and strongest traction that can be met with in midwifery; after which trials the forceps lie before me uninjured and ready for use.

That it may lose its head-curve some day is possible; the risk is inseparable from the advantages of a light and slender instrument. I have seen such things happen to stronger instruments in my hands and those of others (once in the hands of Dr. Shekleton, Master of the Dublin Lying-in Hospital, where they cannot be accused of exaggerating their estimate of the advantages to be derived from any but a limited use of forceps), and if it should, the man justified in using such traction would not thereby injure maternal structures, for if thoroughly understanding his business, and *pulling only with his arms*, he could not allow them to slip far; the more especially as he cannot deliver from the brim without anticipating such possibility at the period of rotation.

To give an example of such a contingency, I may mention that I purchased from Weiss, in London, a pair of Simpson's forceps, which were as nice looking a pair as I ever saw, and many a hard bed-side tug have they had without yielding, until—

Case 1.—*Illustrative of great tractive force—Forceps—Perforator.*—Called in consultation with Dr. Freeman to Mrs. M., a twin, whose sister had died after her second difficult labor. This one a primipara, 26 years of age, at full term, and had been in hard labor for eighteen hours. Second stage.—Os fully dilatable, soft parts cool, head presenting the 2d of Naegele, right occip. post, and wedged in superior strait, after commencing rotation; no fœtal heart appreciable, but strong uterine souffle; Simpson's forceps, preceded by chloroform and baptism; *tremendous tractions, until one blade straightened completely.* Another pair; no better success. Perforator and crotchet now used; hard work. Finally replaced the forceps around the diminished head, and effected its delivery. Shoulders could only be extracted with the blunt hook; tight work even with the breech. Child must have weighed fully 13 lbs. I saw her afterwards, when she was doing well, and I believe that she has done well since.

Remarks.—My reason for making such great efforts with the forceps, even when the fœtal heart was entirely inaudible, was the fear that its position might obscure it; for who has not known the fœtal heart in the presentation of the post. font. to the right sac. il. syn. become audible after rotation alone? I had previously put as much force on that pair of Simpson's forceps without injury to them.

Case 2.—*Puerperal convulsions—Forceps—Safety to mother and child.*—Catharine Murphy, aged 18, unmarried, primipara, fell in labor at Bellevue Hospital at 4.30 A.M., January 16th, 1858. Drs. George S. Hardaway, House Physician,

and Henry F. Andrews, Senior Assistant. Pains strong till half-past seven, when she was seized with a strong convulsion. Muscles strongly contracted; face deeply congested; teeth clenched; foamed at the mouth, but did not bite her tongue. After the convulsion the respiration was stertorous, and the face remained congested for some time, pupils acting sluggishly. After this, the pains were less frequent and feeble. Urine drawn off in a catheter, and found to be slightly albuminous. 9 A.M. Convulsion, similar in character and consequences. Os fully dilated. Ant. fontanelle down in a line a little in advance of right eminentia-ileo-pectinea. Posterior fontanelle a little in advance of right sacro-il.-syn. Fœtal heart most distinct at junction of supra-pubic and right iliac regions. Dr. Elliot ruptured the membranes at 11 A.M. Pulse, 92. 1 P.M. Tr. Ergotæ ʒj. 1½ P.M. Another strong convulsion, during the stertorous stage of which Dr. Elliot applied his forceps with the pivot, and delivered without delay. No mark was left on the child, although one blade was applied over the face, and one over the occiput, rotation not having fully taken place. Perineum somewhat lacerated. After delivering, hyd. chlor. mit. ϑss in butter on back of tongue, and in two hours ʒj ol. ric. Half stupid till 4 P.M., when she had another convulsion, leaving her face deeply congested. Pulse 90, full and laboring. Put in a sitting posture and bled to ʒxvj. Pulse became now less frequent and softer. No signs of syncope. Medicine operated freely at 5½ P.M. Removed to a quiet room, and ice applied to her head. 7 P.M. Rational and easy; pulse 104, soft. 7.35, 96. 9 P.M. Another convulsion; 4 c.c. to nape of neck. Slept quietly all night. 17th. Pulse 84–88. Condition good. Child well, weighing six pounds. Both made a good recovery.

A sample of blood was carefully examined by Prof. Doremus, and found to contain no urea. Microscope disclosed granular renal epithelium, waxy casts, and blood corpuscles.

Remarks.—This case enabled me to test the value of the pivot in an unusual application of the forceps, and by moving it high up, opposite the point where the handles could be kept from farther approximation, no trace of the application was left on the child.

Case 3.—Delivery with forceps, for the sake of the child—Neck encircled six times by funis—Safety to mother and child.—My friend, Dr. Eustace Trenor, sent for me on the 31st of January, 1858, to see Mrs. H., a primipara, aged 27, at full term, well built, robust, with a well formed pelvis. Seen by Dr. T. at 8 P.M., 30th. Membranes then ruptured three hours. Pains irregular and feeble. Condition good. Os just admitted a finger. Summum of fœtal heart intensity to the left. No

uterine souffle. 6 A.M., 31st.—Os fully dilated. Pains strong since 3 A.M., and so continued until delivery. 9.30. A.M. Dr. Trenor sent for me, on account of non-advance of the head, anxious expression of patient's countenance, and dry tongue, and because he could not satisfy himself that the fœtal heart continued audible. I saw her at 11 A.M. Head pressing against bony outlet. Post. font. to right acetab. Vagina cool; perineum rigid. Fœtal heart extremely indistinct, but yet, as I thought, audible. Decided to deliver, principally for child's sake. Applied forceps, with concavity directed to right acetabulum. *Did not need pivot.* Delivered promptly a living child, weighing 6½ lbs., *with cord six times around neck.* Patient under the influence of chloroform given by Dr. T. Placenta came away nicely. On cutting the cord close to the placenta, we wrapped it six times around the child's neck, when the small amount left satisfied us that it was the probable cause of delay.

Case 4.—*Forceps—Living child—Death of mother from puerperal fever.*—Rose Swift was delivered by these forceps, in Bellevue Hospital, on account of arrest of the head, probably from exaggerated flexion. The particulars of the case are published in the NEW YORK JOURNAL OF MEDICINE for July last.

In applying the instrument, it occurred, from the position of the head, that the points of the blades reached the temples, just above the zygomæ, and the handles, of course, not coming together, the pivot was adjusted to obviate risk from pressure. The delivery required strong effort, but left no trace. Dr. Barker was present, and liked the instrument so well that he procured a pair. Child weighed 9 lbs.

Case 5.—*Contracted outlet—Arrest—Forceps—Perforation—Safety to mother.*—On the 26th of March, at 9 A.M., I was requested by Dr. Cadmus to see a primipara, aged 30, who had been in the second stage of labor, with good pains at least twenty-two hours. I found her with a tender abdomen, a very dry and hot vagina, and a diminished outlet, with an excessively rigid perineum. Pulse and expression good. Fœtal heart distinct to the left below the umbilicus. Head presenting, with posterior fontanelle to the *left* sacro-iliac synchondrosis—the movement of descent barely completed.

The condition of the mother, the disproportion of the presentation, seemed to me to clearly indicate necessity for interference, which was accordingly attempted in the presence of Dr. Cadmus and Dr. ——.

The woman having been brought under chloroform, I desired of course to seize the head by the bi-parietal diameter, with the concavity of the blades to the right, but the relations of fœtal head to pelvis prevented me from seizing it otherwise than by

the oblique diameters, which I reluctantly consented to after careful manipulation, and the size of the head demanded that the pivot should be advanced to the highest hole. Now made every effort which I could to rotate or advance the head, first trying to turn the occiput towards the pubis, then in the hollow of the sacrum, or to dislodge it in any way from the position which it had so long occupied, with such risks to the mother. But my efforts were utterly unavailing, though they were continued until there was no alternative for the conviction, and tested alike the tractive force of the instrument, and the reliability of the pivot to prevent compression. When convinced of the impossibility of delivering the child alive, I pushed back the pivot and drew on the head, until the capability of the instrument to act as a compressor was demonstrated by its deep traces, but all without success. Determined to try them fully, I braced my feet firmly, and pulled myself out of breath before they yielded, and when they did, no alteration of position whatsoever had been effected. It was deemed useless to replace them after the trials which had been made, and I delivered a large male child with the perforator and crotchet. No waters of the amnion followed, or hemorrhage, but a stench came after the child which augured ill for the chances of metritis. But, under Dr. Cadmus's care, the woman has entirely recovered.

Case 6.—*Convulsions—Albuminuria—Forceps—Both doing well—Dr. E. W. Lambert, house-physician.*—A. McKay, unmarried primipara, in Bellevue, aged 19. Labor pains commenced at 7 P.M., Aug. 2d. Waters broke while asleep at 9 P.M. Head presenting; os the size of a dollar, and very dilatable. Second fit at 10 P.M.; third in twenty minutes. Chloroform now, and Dr. Elliot sent for. I went immediately with Dr. Wm. T. Green Morton, of Boston, who happened to be with me; applied the forceps, placing the pivot in the second hole, and delivered a living child without any laceration of perineum, although the vulva was very narrow. Placenta gave no trouble. Chloroform kept up for about twenty-four hours. Whenever the patient came from under its influence a convulsion would occur. Urine drawn with catheter, highly albuminous, though there was *no trace of œdema*, no congestion of face after convulsion. Spec. grav. 1.018; no blood; c.c. no. v. to kidneys; emp. vesic. to nape of neck. No attack of convulsion after midnight of the 3d. Vomited a great deal subsequently, relieved by the dilute hydrocyanic acid. Aug. 8th. Doing well.

Remarks.—In this case the forceps were introduced entirely within the os uteri, which readily dilated before the tractions with the instrument.

Case 7.—*Pelvic presentation in an under-sized pelvis—Room singularly obtained for forceps—Child dead—Mother did well.*—Jane Holland, 24, second child. In labor in Bellevue from Feb. 18th, 2 A.M., to Feb. 19th, 2.45 A.M. Drs. F. A. Burrall and N. Barrows. Child still-born, weighed 7¾lbs.

Two years since she was confined with an eight months' child, "cross birth," lived three weeks. Now at full term. Feb. 18th. While preparing for bed, membranes ruptured without previous pain. Came immediately into lying-in wards, when the left foot was distinguished high up, back of fœtus to left acetabulum. Dr. Elliot summoned, and arrived at 1 A.M., Feb. 19th, just as the knee had reached the vulva. 1.40 A.M. Pains being very severe, chloroform given moderately, and in a few minutes the body of the child passed. After the hips had passed naturally into the world, a loop of cord was brought down which could not be felt to pulsate. Motions of the child but an instant before had given signs of life, and showed its danger. Arms being delivered, and the head refusing to yield to traction or the customary manipulations in these cases, Dr. Elliot passed the first blade of his forceps promptly to its position, but the large head of the child so pressed against the right pelvic brim, as not to afford any space for the second, and all hope of saving the child soon fled.

The perforator was sent for, and while making considerable effort to force a dull instrument through the occipital bone, Dr. E. felt the head to rise sufficiently on the right side to allow the passage of the second blade, when dropping the perforator, he applied his forceps, and delivered with difficulty. The uterus not being promptly followed down, hemorrhage followed to an extent which demanded sharp treatment. Did subsequently perfectly well. Child still-born, weighing 7¾lbs.

Remarks.—On some future occasion I shall have something to say of the dangers to fœtal life in pelvic presentations, and the necessity of being always ready to apply forceps when manipulation fails; and I may here introduce a case in point, as *the instrument used possessed the same blades as those here described.*

Case 8.—*Forceps in breech presentation—Rotation backwards of chin.*—A patient of mine, with an under-sized antero-posterior diameter of brim, had been delivered by me of a living child (whose parietal bone was marked by the promontory) with forceps. Falling in labor again, she sent for me, and I took my friend Dr. J. W. S. Gouley with me. We found a large dead child, with the shoulders born, and hanging by the head, the chin having caught over the linea ileo-pectinea, a little to the right of the eminentia ileo-pectinea. Applying

the forceps, I rotated the chin backwards, when, depressing it, I delivered with a promptness which would probably have saved the child's life, had they sent for me earlier.

Case 9.—*Deformity of antero-posterior diameter of brim—Forceps—Version—Perforation—Recovery of mother.*—Mary O'Connell, 33, third, Bellevue, Drs. Andrews and Maury. Labor commenced May 15th, 10 P.M., L.O.A. Terminated May 16th, 11.15 P.M. Child still-born, girl, 9lbs.

Patient short stature, apparently well formed; married ten years; first child delivered naturally, and living, though somewhat before the full time. Four years later delivered, after a tedious labor, of a still-born child. Mary was one of these unsatisfactory patients from whom one can with difficulty learn anything, and when the answer is obtained, one has to suspect that almost as much as the previous uncertainty. However, at 7 P.M., 16th, Dr. Andrews, on carefully examining the patient, appreciated the presentation and position, and rupture of membranes, and detected a diminution of the antero-posterior of brim to somewhat less three inches. He sent for me. I agreed with him entirely; believed it impossible for the child to pass, and anticipated very hard work. Sent for my colleague, Dr. Barker, who recognized the deformity, which was probably due to exostosis, and agreed perfectly in our views of the operative procedure, viz., forceps first, and if they failed, version. Pulse 70; condition of patient excellent. Anterior lip, however, down before the head and œdematous, though readily replaceable. At 10 P.M., then, things being in this condition, no advance having been made, the head above the brim dipping the arc of parietal bone formed by the plane of the brim alone into the superior strait of the true pelvis, I applied my forceps, which were promptly adjusted and locked. I then made traction with all the strength which my arms afford, sitting at one time on the floor, and pulling in the direction of the superior strait with all my might. During one of these efforts I felt them slip slightly, and instantly stopping, re-adjusted them, and continued until all were satisfied that traction was of no avail.

I then withdrew the forceps, and passing my left hand within the uterus brought down the right foot. This was not sufficient, as the other caught above the pubis, and was brought down with some difficulty. The hips being delivered, the cord was found to pulsate feebly. The arms were readily brought down, but no manipulation would suffice with the head, which having necessarily turned with the sagittal suture parallel to the transverse diameter of the pelvis, happened so to close the right side as to forbid all hope of introducing the second blade

of any forceps. The cord now ceased to pulsate. Being by this time pretty well fatigued, Dr. Barker endeavored to bring the head through, but it was too firmly wedged to pass. I then introduced the perforator midway between the occipital protuberance, and the mastoid process, and rattled Churchill's crotchet freely about within the cranial cavity. I then tried to introduce Dr. Thomas's ingeniously contrived craniotomy forceps, but although the blades are only the breadth of the middle finger, there was absolutely no chance for the second blade. Having then hooked the crotchet firmly over the occipital bone, Dr. Barker and I relieved each other in our tractions. He made two efforts, and in my third, the head finally passed, one hour and fifteen minutes after the commencement of the operation.

The woman recovered perfectly, although there was puerperal fever at the time in the house, justifying thus what I sincerely believe to have been excellent practice, viz. in commencing the operation before the patient was exhausted by fruitless effort, and reflecting great credit on Dr. Andrews for discovering and appreciating the pelvic deformity when he did, instead of simply satisfying himself that there was a head presentation in a woman who had born a living child.

Case 10.—*Convulsions—Albuminuria—Absolutely unyielding os and cervix — Douche — Incision — Forceps—Still-born child—Mother died.*

The following case is in the words of my friend Dr. Samuel Rotton:

Catherine H——, aged 26; primip. I was called upon to attend this patient at the solicitation of Dr. James Hyslop, as he had a previous engagement in another part of the city. The patient had for the previous month or six weeks complained to her friends of swelling of the hands and arms, and of the whole of the upper part of the body, and also a puffiness of the eyelids which made it unpleasant to move them; the urine was scanty and at times highly colored. She asked no advice, as she was assured by her friends that it was nothing unusual. She had during the afternoon walked to her sister's, a distance of more than two miles. Shortly after arriving, she was troubled with labor pains, and through the evening, as they increased in severity, slight convulsions accompanied each pain. When I first saw her at 1 A.M., the convulsions were so severe that she did not recover her consciousness afterwards. I found the os slightly dilated, but not more than sufficient to pass with difficulty two fingers, and quite undilatable. The bladder was distended, and I drew off with the catheter about 20 ounces of dark bloody urine. I put her immediately

under the influence of chloroform, and kept up its effect until 4 o'clock P.M., during which time she had but one convulsive paroxysm which occurred while my attention was drawn from her for a short time, so that she passed from under the influence of the chloroform; but during this whole time, with every pain, there was a threatened convulsion which was subdued only by the chloroform. I administered nauseating emetics, and abstracted blood in the hope of procuring dilatation; but at the expiration of 12 hours, the os was as undilatable as at first. I could not at any time hear the fœtal heart, but thought that several times I heard the placental soufflet. About 3 P.M., she seemed to be sinking fast, the pulse sank rapidly to 18, and the respiration to 7 in the minute; I again bled her, and the pulse returned to 90, and the breathing became more frequent and less labored.

I had sent for medical assistance, and Dr. Gouley now arrived; we injected about three gallons of warm water against the os in hopes of dilating it so as to apply forceps; but it remained as rigid as a board. After partially dividing the os on one side, one blade of a pair of rather heavy forceps belonging to Dr. Hyslop was introduced, but it was impossible for either of us to introduce the other blade, and if even the fingers were passed up some distance by the side of the blade, the contractions were so violent as to cause the operator great pain by the compression of the fingers against the iron. We found that with these forceps it would be impossible to deliver, so we sent for Dr. George T. Elliot. With difficulty, Dr. Elliot's forceps, which were much lighter and of very superior shape, were introduced by him, and the delivery accomplished only after dividing the os on both sides.

The child was dead. A warm injection was administered, the bloody urine again drawn off, an active purgative given, and cups applied freely over the kidneys; but the patient did not rally, and died about midnight. The friends would not allow a post-mortem.

[This was probably as well marked an illustration of an absolutely rigid os and cervix as could be presented.—E.]

Case 11.—*Arrest in inferior strait—Forceps by Dr. E. W. Lambert.*—Sarah Rodgers; single; aged 23; 1st L. O. A.—From Aug. 2d, 10 A.M. to Aug. 3d, 9 A.M. Bellevue Hospital.

The head was detained for seven hours in the inferior strait before fairly reaching the outlet. Perineum very rigid. Dr. Lambert, the House-Physician in charge, sent for me to see the case at 4 A.M., Aug. 3d. He attributed non-advance to contraction of outlet. The pubic arch admitted two fingers par-

allel to each other beneath the pubis; the point of ossification between the rami of the right pubis and ischium was certainly too convex. Advised delay, and left subsequent operative interference to the discretion of Dr. Lambert. He waited four hours, and then applying these forceps, delivered a living male child weighing 8 lbs. without lacerating the perineum, although there was very great risk of doing so. Pivot placed in first hole. No traces of blades. *Aug. 8th*, P.M. Both doing well.

Case 12.—*Contracted pelvic brim—Arrest—Forceps—Child still-born—Mother recovered—Vesico-vaginal fistula.*—March 28th, 1858.—Mrs. Barnett, aged 32, fell in labor with her second child, under the care of Dr. O'Rorke. 6 A.M. He found the membranes ruptured, and that she had been in labor ten hours. Os fully dilatable. Presentation cranial, and above the brim; fœtal heart beating; mother's condition good. Twelve hours after this, at Dr. O'Rorke's request, I saw the patient with him. Dr. Kiernan was also present. Mother's condition good; abdomen a little tender on pressure. Fœtal heart and uterine souffle distinctly heard at the same site, viz.: just below the umbilicus on the left side. Pains growing weaker. Outlet well formed. Ant.-post. diam. of brim seemed a little over three inches. Head not engaged in brim. Sagittal suture transverse. Fontanelles not clearly to be distinguished. Pelvis shallow. It was decided to apply forceps, because of pelvic contraction, non advance, and suspicious fact that the first child was still-born. Chloroform by Dr. O'Rorke. Forceps applied over the oblique diameter, extending from left orbit. Having exerted all my strength to no purpose, Dr. O'Rorke relieved me, and advanced the head; as rotation commenced, the forceps slipped somewhat; when having re-applied them, I resumed my tractions with all my force, and withdrew the head. The child gasped when born, but could not be revived. Perineum lacerated. Placenta came away well.

March 29th.—Pulse 120; pain over uterus. Blister 6 × 8 and mercurial ointment; with opium internally.

The traction made by the forceps in this case was very great, and Dr. O'Rorke expressed his surprise that the instrument could bear it.

She recovered well, but complained of water dribbling from her if she stands, or lays on either side. When she lies quietly on her back there is no flow, and she can retain her water all night. I made an examination, which, however, was not very thorough, as I desired to send her to Bellevue, where she could have better opportunities for treatment; and inclined to the

opinion that the case was one of incontinence. My colleague, Dr. Taylor, has made two thorough explorations, and has discovered, on the last occasion, a small opening to the left of the vesical termination of the urethra, in which a small probe can pass. The result of treatment shall be reported hereafter.

The fistula is in a site where there was no pressure either from the head or forceps, and I cannot understand how it occurred. It is the first result of the kind which has ever followed any midwifery case in my practice, operative or non-operative.

Cases 13, 14, 15, 16.—In reply to a note which I addressed to Dr. B. F. Barker, inquiring what experience he had had with these forceps, he replied:

"I have used your forceps in four cases, and they have excellently answered my purpose.

"The first case was a primipara; presentation, right occipito-iliac posterior, the head descending into the cavity, and the occiput rotating backwards. After waiting some time, I became satisfied that delivery would not be accomplished by the natural efforts. With your forceps I rotated the occiput under the symphysis, and completed the delivery with great ease.

"In the second case, also that of a primipara, the forceps were used on account of a narrow vulva, and a rigid perineum, the uterus having become exhausted from the protracted labor. The head was at the lower strait.

"In the third case, the forceps were applied while the head was at the superior strait, immediate delivery being rendered necessary by convulsions.

"In the fourth case, the head was delivered by the forceps after the body had been delivered by turning.

"All of the children are now alive, and the mothers made a good convalescence."

Case 13 affords an interesting example of what should always be at least attempted, and tempts me to record a case of great interest to me, and having a direct bearing on the subjects of this article, as illustrative of successful rotation with Dr. Simpson's forceps in a difficult class of cases.

Case 17.—Mary Jones, aged 19; first; Bellevue. Dr. C. Haasse, house-physician. In labor from Nov. 10th, 1857, 11 P.M.—12th, 6.40. Child, girl, weighing 8½ lbs. Both did well. First seen Nov. 11th, at 2 A.M., by Dr. Haasse. Os just admitted the finger. Membranes broke at 4 A.M. Os then dilated to the size of half a dollar. Pains good, but little progress till 9 A.M., when they ceased. Morphine then enabled her to sleep, from 10 A.M. till 3 P.M. Dr. Haasse then made out face presentation. Caput succedaneum on right frontal protuberance. Chin di-

rected nearly back to right sacro-iliac-synchondrosis. 5½ P.M. No perceptible progress. Dr. Elliot delivered a living child with Simpson's forceps, rotating first the chin to the pubis.

Remarks.—I have seen but three cases of face presentation which required interference; one with Dr. I. E. Taylor, in which he turned; and

Case 18.—One to which I was called in consultation, and to which I also invited Drs. Metcalfe and Charles D. Smith. The patient was a primipara—the presentation had not been recognized, and the eye had been pushed out by repeated examinations, and hung from the denuded orbit. No fœtal heart. I applied two different pairs of forceps, and neither Dr. Metcalfe nor myself could move the head; when I perforated through the orbit, and the mother made an excellent recovery.

Case 19.—*Prolapse of funis—Dr. Thomas's plan—Forceps—Living child—Mother did well.*—Joanna Burke, aged 24; 1st; Bellevue. Drs. H. F. Andrews and R. B. Maury. May 9th, 1858, 10 P.M. Os size of a dime, membranes to be felt durng a pain. 4.45 A.M. Membranes had ruptured; water gone; several loops of funis without the os uteri, and pulsating strongly. Dr. Andrews faithfully tried to reposit the cord by Dr. Thomas's plan (*vide* vol. iv. p. 241, N. Y. J. OF MED.), but without success; patient unruly. The woman was kept in Dr. Thomas's position for more than an hour; I was then sent for, and the patient placed on her back, and chloroformed to stop risk from uterine contraction. Went instantly, and arrived a few minutes before six. Directed Dr. Lambert to spring on the bed and hold the woman's hips in the exact position recommended, detailing another gentleman to watch the respiration, as she was fully under the influence of chloroform; and by introducing my whole hand in the vagina, succeeded in repositing the scarcely pulsating funis within the uterus, to such an extent, that the two fore-fingers, buried within the uterus, could barely touch it. But when the next pain came on, it drove the funis up the reversed superior strait, so as to fill the vagina to the vulva. There was no time to lose; and having the woman rapidly placed on her back, I delivered her with all haste possible. The head had barely completed the movements of descent, and was yet in the superior strait; and my forceps were thrown over one oblique diameter, and the child delivered almost as rapidly as I can write this description. The pivot was not regarded much, and the child was marked over the lip with one blade, a result which could have readily been avoided, if I had adjusted it accurately before making my tractions. But I had waited so long for the hope of success, in the manœuvre described, that I did not dare delay one instant.

The child was asphyxiated, but was restored to life. It died on the fourth day, from inanition, with which I think that the sore lip had something to do.

Remarks.—I have since had an opportunity of repeating this manœuvre, in a case where there was originally presentation of edge of placenta, hand and foot, which became complicated with prolapsed funis.

Case 20.—*Placenta prævia—Presentation of foot and hand—Prolapse of funis—Adherent placenta—Hemorrhage—Child born alive—Mother did not recover.*—Consultation with Dr. Eustace Trenor; report condensed from his notes. Mrs. Kane, aged 30, has suffered for several years from bad health and bad habits, and has on three occasions flooded seriously after miscarriages. Last March, when six months gone, she was much excited in endeavoring to procure bail for her husband, who had been arrested for disorderly conduct. On the next day she had a moderate attack of hemorrhage, controlled by Dr. Trenor. Two subsequent attacks were controlled by Dr. E. Hoffman.

June 2d.—She was awakened during the night by labor pains, followed by liquor amnii, when the pains ceased, and she flowed profusely. Dr. Trenor saw her in about three hours, and found her rather pale, with a quick and somewhat feeble pulse of about 88, complaining of weakness, and somewhat restless. Os uteri pretty high up, dilated to about the size of half a dollar, rigid, thick, and filled with a clot. At Dr. T.'s request, I saw her at 7 P.M., when the pulse was 83, moderately strong; lips somewhat blanched; expression pretty good; no dizziness or dimness of vision; voice strong; abdomen flaccid; long axis of uterus transverse; fœtal heart in right lumbar region; no clots in vagina; no flow of blood; an old fœtid clot, weighing about ʒij. lying within the os. No central implantation of placenta, and no placenta felt at that time. Os uteri dilated to the diameter of 1½ in., and not in any way dilatable. Two fingers passed within detected either an olecranon process, or an os calcis. It seemed to me most likely the former. The tips of either fingers or toes could also just be touched. I thought them most likely the fingers.

11 P.M.—Saw the patient again with Dr. Trenor and Dr. Maury. Pulse 78; moderately strong. Expression better. No hemorrhage. Os as before. Presenting parts not reached more readily, but a flap of the stringy placenta now recognized hanging to the os on the right side.

June 3d.—Has vomited once or twice during the night, and then slept quietly. No hemorrhage. Condition rather better. Slight pains commencing. Os uteri softer. At noon, Dr. T.

found that dilatation was slowly progressing under the influence of moderate uterine contractions. Ordered ℥j. ol. ric., as the bowels had not been moved since May 30th.

At about 4 P.M. *Dr. Trenor called on me, and stated that a loop of the cord was now presenting at the os uteri and pulsating.*

Went immediately and placed the woman most accurately in the position recommended by Dr. Thomas, and introducing my left hand entirely within the vagina, returned the loop so deeply within the uterus that it could just be touched by my two forefingers buried within it. I thus retained it during two pains, my fingers, in the direction given to the superior strait, pointing downwards and towards the bed. In the interval that followed the second uterine contraction, I withdrew my fingers, and found, to my regret, that the next pain drove the cord *up* the inclined plane of the superior strait into the vagina. A repetition of this manœuvre was attended with a similar result. Not deeming it prudent to delay longer, but maintaining the woman in the same position, I turned my attention to the os uteri, which I now found dilatable enough to admit my hand sufficiently far to recognize, first, a hand, which I dropped, and then a foot, on which I drew (the woman all the while in the same position), until I had drawn the thigh into the world, when I turned the patient on her back, and rapidly completed delivery. The child gasped, breathed, had a good color, and gave every sign of reviving, and then disappointed my carefully-founded hopes by dying, in spite of every effort used for restoring life.

I had no post mortem, but have seen children die suddenly in this way, just after a natural labor, in which there had apparently nothing untoward occurred. The liver seemed, however, in this case, to be noticeably large.

The uterus, meanwhile, had firmly contracted around the placenta, ℥ij. of Canavan's fluid extract of ergot having been given immediately after the birth of the child, but Dr. Trenor called my attention to the fact that blood was flowing in a continued stream from the vagina. On introducing my hand into the uterus, I regretted to find that the placenta was everywhere adherent, except at the flap alluded to, and removed it with some trouble, being obliged to leave some pieces which could not be detached without bringing the uterine wall with them. The flooding diminished, and the uterus contracted, but not firmly. ℥iij of ergot and brandy given. Her expression, behavior, and pulse were now such as to threaten instant death. Dr. Trenor went, at my request, for Dr. Van Buren, to transfuse the patient. It was, however, nearly two hours before Dr. V. B. arrived, and by this time the hemorrhage had been controlled.

During all this time her head was thrown down, arms and legs held up, ice over the fundus, while I carefully grasped the uterus with one hand, which at the same time compressed the aorta through the yielding abdominal walls; and with the other, with the aid of ice in the vagina, irritated the cervix, in the hope of reflex action, and thus, with the aid of ergot, brandy, chafing, and hot cloths, after an hour and a half hard work, rallied the patient, whose pulse had twice disappeared from her wrist. I have seen a number of bad cases of flooding, but never saw one so near death recover, except a woman with placenta prævia, in the Hôtel Dieu, in Paris, whom Nélaton successfully transfused, though she afterwards died from metro-peritonitis. The pulse shortly rallied after vomiting, and at 8.30 was 120, very feeble, and the patient restless, sighing, and tossing about, with a very feeble and exhausted expression.

My mind inclined to the propriety of transfusing her then, but it was concluded not to do so.

June 5th, 10.30 A.M.—Since the last note, Dr. Trenor has carefully fed the patient on beef tea, brandy and opium, and she has rallied. Ergot kept in readiness, quinine and sulph. acid given, and a blister has been applied over abdomen, to anticipate metro-peritonitis.

June 6th, 4 A.M.—Dr. Trenor was sent for in haste, as the patient had been flowing freely since 1.30 A.M. By the time he had reached the house, the patient had taken ℥jss. tinc. ergot. A sheet and three smaller cloths were covered with blood, and there was a great deal in the bed. The patient was blanched, almost pulseless, and too feeble to speak above a whisper. On examination, the vagina was found filled with a large clot, and the uterus with another, both of which were removed. The uterus was flabby and enlarged. ℥ss. more of the tinc. ergot, with irritation of the cervix by the fingers, brought about a lazy uterine contraction. Brandy was given freely, and the uterus compressed by the hand; but the hemorrhage persisting, Dr. T. plugged the vagina with strips of oiled linen, and finally brought about firm contraction, which was insured by the hand for three hours, when the binder was re-applied. During these three hours Dr. T. had kept the head down and the arms and legs in the air, and had given brandy somewhat freely. The pulse, at the wrist, was now but just perceptible, and sensation in the legs almost gone. She complained of darkness, her lips were blue, and the skin of the upper lip and towards the alæ of the nose acquired a dusky hue. After the application of the binder, brandy and beef tea were given, and she gradually rallied, sleeping at first, and

afterwards becoming restless, throwing herself on her side, and from one side of the bed to the other, suddenly. 10 A.M. Pulse 124. Has vomited five or six times, and taken ¾ gr. of opium. 2.45 P.M. Suddenly attacked with a violent fit of vomiting, throwing off in all about a quart of fluid—at first the nourishment which she had been taking, and then matter of a dark greenish hue, with greenish and very dark flocculent matter in it, and without odor. In about fifteen minutes a violent chill came on, lasting some fifteen minutes, when some reaction came on.

June 7th, 11 A.M.—Tampon removed from vagina. During the night had several hard chills, one of them apparently excited by swallowing ʒss. of Labarracque's Solution, given by her mother-in-law (who also stupidly threw away the placenta). Stomach very irritable; takes very little. Some attacks of faintness. Coughs, with pain in the ovarian regions. Pulse 124. 4 P.M. Pulse 140. Resp. 30. Abdomen more tympanitic, and tenderness spreading upwards laterally. Micturition causes severe pain in the hypogastric region. The skin is covered with a cold perspiration, and dusky, livid spots are appearing on the thorax anteriorly. Ordered, every three hours, ʒj. of a solution of the sulphate of morphia, gr. iiiss.–ʒiv. of water.

June 8th, 10 P.M.—Under the influence of morphia. Pupils contracted; patient quiet and sleepy. Spots disappearing from thorax. Pain less acute, but more extensive. Pulse 116, stronger and fuller than yesterday. Respiration 36. Continue morphia, and ol. tereb. gtt. x. every second hour, and an enema containing ol. tereb. ʒij. and ʒj. ol. ric. in emulsion.

5 P. M.—A little more restless. Pulse 134; respiration 38; subsultus tendinum. Has had one dark green fluid evacuation resembling the matter vomited two days ago. Abdomen softer and less tympanitic, but not less painful. Lochia have almost ceased; tongue becoming dry and brown with disposition to crack. Face very anxious. Lies on her side with knees drawn up.

9th, 11 A. M.—Pulse 120; respiration 58.

7 P.M.—Died. No post mortem allowed.

Remarks.—Although this case has no direct connection with the subject of this article, yet I think that its interest would warrant its introduction into any article on midwifery. But it is published here on account of the interesting parallelism between the results of the same manipulation for reducing the prolapsed funis; and because I desire to say that notwithstanding the failure of the manœuvre proposed by Dr. Thomas in these two cases, I am convinced that by its aid we can better, and more readily, retain the funis in utero than by any other means with

which I am familiar, and we are always well entitled to hope that the funis may slip behind some presenting part sufficiently large to retain it, and thus be restored to its original and natural position in the majority of cases. I shall certainly employ it hereafter whenever the condition of facts is such as to prevent me from delivering with great rapidity, either manually or with forceps. But from these two cases we can see that the position proposed and careful reposition of the funis, are not of themselves sufficient to prevent the funis being driven up hill by uterine contraction, unless sheltered by a presenting part of sufficient volume.

Case 21.—*Deformed pelvis—Breech presentation—Perforator—Convulsions—Recovery.*

Remarks.—This, like the complicated case of labor that I saw with Dr. Trenor, has no bearing on the forceps presented, but serves as an additional example of the growing frequency of the pelvic deformities imported into this country by the lowest of our foreign population. Things have changed greatly since the days of Dewees. A graduate of Bellevue Hospital now runs a fair chance of seeing as many deformed pelves during his eighteen months connection with the Hospital as that distinguished man acknowledges to have met with during his career; and thus the practice of obstetrics is being modified by this among other causes.

Mrs.——, a primipara, aged 25, short in stature, but with no apparent deformity, came to full term, and fell in labor on the night of the 12th under the care of my friend, Dr. H. S. Hewit. At 11 P. M. the membranes had ruptured and the waters escaped. Fœtal heart beating; breech presentation recognized; pains slight. Sent for me 9 A. M., 13th. Found os fully dilatable; sacrum of child directed to left sacro-iliac synchondrosis. Fœtal heart very audible, with summum of intensity above and to left of umbilicus; maternal passages and pulse good. Pains had been strengthened by ergot. Recognized general pelvic deformity; pubic arch good, but rami of ischia too close. Entire brim under size with apparently $2\frac{3}{4}$ of antero-posterior diameter and promontory sharp.

The pains continued good all day, as did the fœtal heart and the mother's condition. The child's scrotum was distended and forced down. Its sphincter ani contracted around the finger.

In the evening, after watching the patient for twelve hours, I advised an operation, and stated that the difficulty would be so great that I should require another assistant, as Dr. Hewit was to take charge of the chloroform. Dr. Metcalfe then became associated with us, and I proceeded with a blunt hook to bring down both thighs, and then both arms, which was accom-

plished without fracture. The head came to the brim with the chin to the left ilium, and no manual efforts were of any avail; nor was there any space for forceps. I then introduced the blunt hook into the mouth, the child being dead, and pressing the crotchet against the occiput, worked till I fractured the jaw at the junction of the left ascending ramus, without any effect. Then introduced the perforator behind the mastoid process of the right side, and made ineffectual efforts with the crotchet. At this stage, there was room for one blade of the cephalotribe in front of the left sacro-iliac synchondrosis, and I introduced it in the hope that some lucky move would make room for the other; but it was impossible. Accordingly I re-introduced the perforator and crotchet, and pulled till I was temporarily used up, though the head had now begun to descend. Dr. Metcalfe succeeded me, and with strong effort withdrew the head. Placenta followed immediately, and uterus contracted well. No hemorrhage. Some symptoms of metritis, which subsequently presented themselves, yielded to a blister dressed with mercurial ointment, and the exhibition of morphia and the veratrum viride.

The patient had convulsions of a mild character on the following Tuesday night, in which the tongue was not bitten; and again on Wednesday night, Dr. Hewit being summoned suddenly to her, witnessed a recurrence of the phenomena apparently from fright. Urine drawn with the catheter, and examined by Dr. Gouley, gave evidence of a slight amount of albumen with casts of the uriniferous tubes, and blood corpuscles.

26th.—Has done well. Premature labor advised hereafter.

Case 22.—*Contraction of antero-posterior diameter of brim —Forceps— Version—Perforator.*—This was a case, to which Dr. McLeod, the present resident physician of the Lying-in Asylum, was called in consultation, Dr. Powers being in attendance. Dr. McLeod being now (Aug. 9th) out of town, I cannot present all the points of the case, nor its subsequent result.

The deformity was such, that the finger readily enough reached the promontory, when passed along the plane, extending to the lower part of the pubis. Her first child had been force-delivered, still-born; she was now at term; and after a tedious labor, Dr. McLeod had applied forceps, the head not being engaged within the brim, and had failed to advance it. He then performed version, a difficult task in this case, with a large male child to contend with, and had brought away the trunk without injury, but could not advance the head by any traction. Failing entirely with the hand, and the child being dead, with the chin to the right ilium, he introduced the

crotchet in the right orbit, and made strong traction, until the orbit and malar bone yielded before the instrument to the alveolar process. He then requested me to see the case. She was under the influence of chloroform, administered by Dr. Powers. The woman's condition was good, and I tried manual efforts, as I often have in these cases, until I have felt and heard the bones of the neck crack, and without avail. With the permission of the gentlemen, I applied my forceps, and hung on it awhile to no purpose. In this case the blades could be readily introduced; so capricious are these cases, some of the diversities of which are illustrated in this article; and there being nothing left in the right orbit to pull on, I proceeded to introduce the perforator, designed by M. le Dr. Blot, of Paris, which I like better than any perforator which I ever used. My reason for not using it at once, was chiefly the position of the head. It was so high up, and so locked, that there remained but the choice of two places for perforation. One through the mouth, with the risk of its slipping through the hole made by the crotchet, and the other through the occipital bone, between the protuberance and the mastoid process, and here the entrance of the point could not be guarded, and the axes of the head had to serve as guides. Having opened the head and evacuated the brain, Churchill's crotchet did the rest, the base of the occipital bone giving a capital purchase in these cases.

Chloroform.—Perhaps it will be as well to mention here, in reference to chloroform, that I always use it in private midwifery practice when desired, and always offer its advantages; and have never performed but one midwifery operation without it, and then in deference to the wishes of a senior physician; and that neither in these cases, nor in the very numerous ones in which I have given it for my surgical friends, in the severest operations, have I ever had cause for regret or alarm. On one occasion, there was a little boy at the Asylum, thirteen days old, with a congenital oblique inguinal hernia, which had been always reducible, and was now so no longer. Failing with the taxis, I requested Dr. John C. Cheesman to see it, and he manipulated the parts carefully, and without success. I then proposed to give chloroform. He stated his preferences for ether, but allowed me to do as I chose. Having brought the child under chloroform, I held him up by the heels, when Dr. Cheesman reduced the hernia instantly. In the afternoon, on my way back from the truss maker's, I met Dr. Murray, of the army, told him of the case, and asked him to visit it with me. We found the hernia down, and not caring to try too much taxis under the circumstances, I gave chloroform again, and with

the same result. Radical cure was then effected with the truss. This must have been nearly five years ago.

Case 23.—Before closing this article, which has spun itself out to an inordinate length, I would like to mention a case, happening some two years since, which now occurs to me, illustrative of the second point made, regarding the application of the forceps. Unfortunately the notes are not in my possession, but it becoming, in the opinion of Dr. I. E. Taylor and myself, desirable to deliver a woman in Bellevue, in whom the child's head floated above the pelvic brim, I proceeded to turn in the presence of Dr. Taylor, and the house staff. Of those present, I remember at this moment Drs. John C. Draper and Bolling A. Pope. Having introduced my left hand entirely above the pelvic brim, I found that the wrist accidentally steadied the head by pressure on the chin. Calling for Dr. Simpson's forceps, without removing my hand, I delivered a living child. Mother did well.

43 West 32d street.

ART II.—*On the Changes of Blood-cells in the Spleen.* (An Abstract of an Inaugural Thesis.) By HENRY DRAPER, M.D., of New York.

THE researches of Mr. Gray, Professor Kölliker, Dr. Sanders, and others, show that the spleen consists of an exterior fibro-muscular coat, from the internal surface of which bands project in every direction. The divisions to which these bands give rise, are filled by—1st, splenic corpuscles; 2d, parenchyma; 3d, blood-vessels and lymphatics.

The splenic or malpighian corpuscles are made up exteriorly of a prolongation of the sheath of their artery (for they are arranged upon the artery like grapes upon a stalk), containing, 1st, very minute cells, with nuclei; 2d, free nuclei; 3d, according to Dr. Sanders, bright golden-colored cells; 4th, an intercellular plasma; and 5th, the arterial twig.

The parenchyma consists, in a great measure, of the same minute cells imbedded in a plasma; but here and there, interspersed, are: 1st, large cells like blood-cells; 2d, small cells, consisting of granular matter; and 3d, aggregations of decaying blood-cells.

The arteries of the spleen break up into small branches, which, passing through the malpighian corpuscles, become capillaries as they reach the parenchyma, where, of course, the veins originate.

The spleen is thus seen to present a very considerable analogy to the sugar-making portion of the liver. There are, in both cases, arteries breaking up into small twigs, ramifying through

and on the surface of masses of cells, changes occurring in the contained blood by the contact of those cells, and the products are conveyed away by the veins, so that if the spleen has no duct, this fact by no means condemns it to be called merely a reservoir.

The views in regard to the functions of this organ have been very various. Dr. Funke, who experimented on horses, came to the conclusion, that in the splenic vein; 1st, the blood had a much larger proportion of white or colorless corpuscles; 2d, that the red cells differed from those of other blood, in their mode of aggregation; 3d, he thought that he perceived the white changing into the red; 4th, that there are always some cells with three or four nuclei; 5th, that there are large round or oblong granular bodies of various sizes; 6th, that there are occasionally crystals, apparently formed from the blood-cells.

Professor Kölliker supposes that the spleen destroys the cell-wall, and changes its hæmatin into the coloring matter of bile.

Hewson maintained that the spleen was the birth-place of young cells, and his views have been supported by Professor Bennett, who showed that in cases of over proportion of the colorless corpuscles, from which the red cells arise, there was hypertrophy of some one of the ductless glands.

Hence it may be seen that on one side are arrayed Funke, Hewson, and Bennett, who believe the spleen to be a generator of blood-cells; and on the other, Kölliker, who believes it to be a destroyer of them.

Besides these authors, many others have written, some on one side, some on the other, but still with the same contradictory result.

The present series of experiments was undertaken to clear up some of these doubts. There is brought into the field a most powerful aid to microscopic inquiry, photography, an aid which cannot be too highly appreciated, since it frees us from the necessity of having to depend on treacherous recollections of former objects, and enables us to compare the sun's transcripts, one with another, side by side, and demonstrate variations, which otherwise would never have been noticed.

The animal chosen was the frog (*Rana esculenta*). He is readily accessible, and the various kinds of blood can be obtained without much trouble, by a careful dissection. His great advantage is the large size of his blood-cells, rendering it comparatively easy to see the changes occurring in them. The blood was photographed dry; 1st, because from the result of several experiments, it did not seem to make any change either in the form, or arrangement of the cells; and 2d, to avoid the complications incident on the use of suspensory solutions.

The plan of procedure was, to take a frog and submit him to the operation of water at 150° Fahr. This produces a species of tetanus, suitable for the dissector's purpose, for all visible motion, except that of the heart, ceases. Then the animal being stretched on a board and secured, a longitudinal incision was made at one side of the median line, to avoid the large vessels which lie in that line. The incision being carried through the abdominal walls, the intestines were carefully drawn out, and with them the spleen. A piece of white cardboard was then introduced underneath, in order to show plainly the course of the vessels.

Up to this time it was not necessary to lose more than a single drop of blood in the dissection. The vessels being then plainly seen, the peritoneum was cut away so that the spleen was retained in place only by them. The artery being discerned, was seized by a pair of forceps, and cut on the side nearest the heart, then immediately after the veins were severed, and the spleen being put on a slip of glass, a drop of blood was allowed to spread itself thereon, the artery having all the while been retained closed. These drops were dried in the open air, and were submitted to a power of about 250 diameters, and photographed on glass. From those pictures on glass, the paper proofs illustrating the thesis, were taken.

For the investigation of the functions of a gland, there is, of course, no plan so sure to be successful as an examination of the change it has induced in the fluid passing through it, and substantiating such an examination by an analysis of the produced secretion or excretion.

In this gland, however, where no duct exists, and where the guidance of the secretion is lost, we are necessitated to examine the passing blood with double care, and noting its changes, draw from them the requisite information.

The essential object, then, of these experiments, was to procure blood-cells from the splenic artery, or other general systemic source, and also from the splenic vein. The blood from the artery or system generally represented, of course, blood as yet unchanged by the spleen, and that from the vein, blood at a maximum of change, having just passed through that gland. A number of photographs of each kind were then taken, and one set compared with the other in various ways, and their differences noted. A choice was made at random from the tables of differences thus produced, and the conclusions at the end of this paper were drawn.

At first, attention had to be directed to the relative anatomy of the splenic vessels of the frog. Injections of the arteries of his abdominal viscera are very difficult to make, because, as the

vessels are small, a fine injection must be used, and the capillaries on the intestinal walls are so large, that before all the arteries are full, some of the veins will be pretty well injected, and a dissection subsequent to the injection would be very deceptive. The only plan suitable under these circumstances, is after having drawn out the intestines and exposed the spleen on cardboard, to inject and carefully observe how the vessels are filled. Of course, if in several cases one of those going to the spleen fills immediately, and the rest after some time begin gradually to be colored, from the intestine, toward the spleen, it is justifiable to say that the first filled is the artery and the others the veins.

The next point was to secure specimens from various frogs, and having dried, to label them.

The operation which succeeded, namely, photographing the microscopic image, was by far the most difficult to perform successfully. It consisted of managing the microscope, of photographing the image on glass, and of transferring it by chloride of silver to paper. The method of illumination, and the focusing of the microscope, are only to be obtained by experience. In fact, these and the photography, have left me but a small part of three summers. The difficulties of photography can only be known to those who have attempted it. A good negative is for long and long

"Rara avis in terris, nigroque simillima cygno"

to the amateur.

There will be presented in this paper results from the blood of the splenic veins of four different frogs, of the splenic artery of one, of the amputated legs of two, and of the vena cava of another batrachian, the toad; the four last being taken as general systemic blood.

In a printed abstract, it is of course well-nigh impossible to introduce photographs for illustration, as was done in the original Thesis, now deposited in the Archives of the University Medical College. And woodcuts executed from those pictures would be worth nothing, for the value of photographs turns on the fact that they are produced (it might be said) without the intervention of human art, and are copies of microscopic images executed by the sun, not having passed through the draughtsman's and the engraver's hands, each of whom introduces in his work necessarily some inaccuracies, which are fatal to the comparative trial that these cuts would have to endure.

We must therefore content ourselves with simply producing, and examining the tables deduced from those photographs, referring any one who takes an interest in the matter to the originals.

In the blood of the splenic vein, of 100 cells, 85 were distorted and broken, while only 14 were perfect. *The perfect were therefore to the imperfect, as* 1 *to* 6. *In the blood of the amputated leg*, which is a fair representative of general systemic blood, of 140 cells, 68 were perfect, and 67 distorted and broken. *The perfect were to the imperfect, as* 1 *to* 1. And what renders it more striking, is that of all the specimens of general blood that will be introduced, this one has the largest proportion of imperfect cells.

In the following table, from which the above facts were drawn, the cells called perfect are those which are of an elliptical shape, and whose nucleus is central.

TABLE I.

	Where from.	Perfect.	Distorted and broken.	Total.	Perfect to Imperfect.
Fig. 4,...	Splenic Vein,...	14	85	100	1 to 6
Fig. 5,...	Amputated Leg,	68	67	140	1 to 1

It will be observed that the column marked Total, does not correspond with the total of the two columns marked Perfect, and Distorted and broken. This is owing to the fact, that the three columns are produced by three separate countings from the photograph, and not by a process of addition and subtraction, as tables often are. The deficit consists of cells so nearly perfect, that in counting they are passed over as being neither perfect, nor imperfect.

The photograph corresponding to Fig. 4 contains besides two other interesting objects. The first is one of those bodies known as blood-corpuscle-holding-cells, and consists of a sac whose section is about four times the size of that of an ordinary blood-cell, and which seems to contain in its substance four nuclei, each with a semi-developed, or half disintegrated cell-wall. It is the only one that has come under my notice at any time.

The second object of interest is a blood-cell which apparently incloses a crystal, but upon a very careful examination of the original preparation at different foci, this was demonstrated to be merely an optical deception, produced by a wrinkle in the cell-wall.

No note is taken of chyle corpuscles and free nuclei. There seems to be, as a general rule, from four to ten per cent. of them, in all the kinds of blood that have been used for specimens in this thesis.

Before going further, it is well to create a standard of the perfect and imperfect cells in general systemic blood. By de-

ductions from the following table, we shall show that, *of every 5 cells of systemic blood, 2 are imperfect, and 3 perfect.*

This proportion seems extremely high for the distorted and broken cells. By leaving out Figure 5, we could lower it to 4 in 13, but it is better to allow it to remain, high as it is; for although the imperfect may be, and probably are, considerably less in number, still, if we can establish the fact that average splenic blood (venous) contains a greater number of imperfect cells than this, such a difference will be all the more striking, when the average systemic proportion is lowered.

The results that are now introduced are from pictures of blood procured from the amputated legs of another frog, from the splenic artery, and from the vena cava of an analogous batrachian, the toad.

TABLE II.

	Where from.	Perfect.	Distorted and broken.	Total.	Perfect to Imperfect.
Fig. 5,	Amputated Leg ..	68	67	140	1 to 1
Fig. 6,	Amputated Leg ..	73	56	137	4 to 3
Fig. 7,	Splenic Artery ...	86	39	126	2 to 1
Fig. 8,	Toad's Vena Cava	68	5	73	13 to 1
	Total	295	167	476	3 to 2

We shall now examine tables from several specimens of splenic venous blood, and from them shall demonstrate that, *of every 6 cells from the splenic vein, 5 are imperfect.*

The reason that so large a number as nine figures are used, is because it is much more important to get a fair average proportion than in the former case: for any one can see systemic frog blood; not so with that from the splenic vein.

TABLE III.

	Perfect.	Distorted and broken.	Total.	Perfect to Imperfect.
Fig. 4, ...	14	85	100	1 to 6
Fig. 9, ...	15	82	97	1 to 5½
Fig. 10, ...	17	101	120	1 to 6
Fig. 11, ...	3	50	53	1 to 16
Fig. 12, ...	10	67	81	1 to 6½
Fig. 13, ...	13	103	120	1 to 8
Fig. 14, ...	24	102	127	1 to 4
Fig. 15, ...	23	74	97	1 to 3
Fig. 16, ...	30	75	110	1 to 2½
Total,.....	149	739		1 to 5

The photograph corresponding to Fig. 10 shows, as well as can be, all the characteristics of splenic venous blood. There are in it perfect cells, swollen cells, stretched cells, cells with a piece broken out, cells with a part of their contents removed, empty cells of a chlorotic appearance, broken cells with the nuclei near the edge, relics of cell-walls, free nuclei. *Is the spleen creating or destroying?*

Comparing now the results of Table II. with those of Table III., we see that, in the former, of every 5 cells, 2 were imperfect, and in the latter, of every 6 cells, 5 were imperfect. Reducing to a percentage, we find of imperfect cells—in the systemic blood, 40 per cent.; in splenic vein blood, 83 per cent.

The conclusion then is plain. The number of imperfect cells in splenic vein blood is double the general systemic average.

We may also, by a careful examination, perceive that the progress of destruction is first a tendency to loss of form, then a decrease of the power of impeding light, caused either by change of color or diminution of the contained fluid, then a rupture of the cell-wall, either from swelling or from some chemical change in it, finally the escape of the nucleus, and complete solution of the cell-wall. Not that this is always the case, for many cells seem to break down at once.

But let the change be what it may, it can only be partially accomplished in the spleen, else how is it that we see so many coming out distorted and decaying?

The most natural conclusion is, that blood-cells coming here, after having made the tour of the circulation several times, have such a change wrought, either in themselves, directly or indirectly, by means of the plasma which contains them, that their walls become no longer capable of resisting the weak mechanical forces to which they are subjected. Perhaps the fibrinous wall changes like the fibrin of muscles, and becomes inosite and creatine; the inosite passing on to complete oxidation in the lungs with its kindred liver sugar, or becoming liver sugar. As for the rest of the cell, the fat of the nucleus becomes liver fat, or bile fat, or liver sugar, the hematin colors the bile, and the globulin becomes casein, or some analogous body.

Some of those cells which have passed apparently safely through, may perhaps carry the elements of change impressed upon them, and in this way we might account for the distortions in general blood.

That such an action as I have described may take place in the cell-wall in passing through the spleen, is easy to believe from a very casual view of the structure of that organ.

Finally, the great conclusion arrived at is, that as it is proved

that the splenic vein blood contains at least double the general average of imperfect cells,

The Spleen must be an organ for the disintegration of blood-cells.

Art. III.—*Remarks on the Treatment of Fractures of the Thigh, with a new Apparatus.* With report of cases (continued from page 330, vol. ii., 3d Series). By J. H. Hobart Burge, M.D., Surgeon to Brooklyn Central Dispensary, late Surgeon to the New York Dispensary, etc.

In my last communication, on this subject, I described an apparatus devised by my brother and myself, for the treatment of fractures of the thigh which, in our opinion, and that of many others, who had seen it, was better calculated to answer all the indications which arise in the management of these grave cases than any other appliance in use. In reviewing what was then written, I am gratified that my enthusiasm did not lead me to over-estimate the work of my own hands, and that I made no promises which have not been more than realized, and set up no claims which have not been substantiated. It is, of course, gratifying to us to hear but one opinion as to the excellence of our apparatus; but it is doubly pleasing to be assured that we have left to others to discover in it possibilities of good, some of which we did not at all foresee, and others of which, though hoped for and expected, we were conservative enough not to promise, but to leave to the decision of experience.

After detailing one of the cases given below, Dr. C. L. Hubbell, Attending Surgeon to the Troy Hospital, writes as follows: "As to the general plan, scope, and claims of your apparatus, I most heartily say, it is all you represented it to be. Our patient did not complain at any time of the counter-extending pressure upon the tuberosities of the ischia, although a good degree of extension was kept up most of the time. Indeed, he was more comfortable when it was kept up, particularly in the first week or two of his confinement, and *complained* when it was let up. I have always used for fractured thigh, what is known in the N. Y. Hospital as Buck's modification of Desault's long, straight splint—latterly with the aid of adhesive straps, and although having no reason to complain, on account of shortening or any other bad result, yet I should much prefer your apparatus, for the simple reason, that just as good a result can be effected with infinitely more comfort to the patient, and less trouble to attendants and nurses. In addition, I would suggest to you the propriety of recommending your apparatus in the treatment of fractures of the pelvis. It seems to me,

nothing better could be devised (of course dispensing with that part of it below the cross-bar) to procure firm and equable support; to avoid motion of the fractured bones, and thus retain them in perfect apposition. The most perfect support would be given to the innominata, by the aid of properly arranged compresses, laterally, and in cases of fracture of the ramus of the ischium, or of the pubis above, near the symphysis, the counter-extending straps of a broader shape, well padded, could be used to great advantage. And, what is usually the most difficult thing to avoid, viz.: defecation, without pain to the patient, or great trouble to attendants, would be entirely avoided by the provision so happily secured for that purpose in your apparatus."

Other surgeons have observed its applicability to cases of incipient hip-disease, making just extension enough to take off the pressure from the inflamed surfaces, keeping the parts perfectly at rest, and affording ample facility for the use of any form of counter irritation. Several of the most practical surgeons among us have spoken favorably of this view, and though no case has yet been treated, the operation is so simple, that one could not be disappointed in the effect in any given case. Of course, for such treatment, the cases must be selected—one plan will not do for all.

Another feature of this apparatus, never before published, is the liberty it affords the patient of sitting up, during the whole course of treatment. This was enjoyed even in the three cases published a year ago, yet we suppressed all mention of it. We did speak of the entire freedom from restraint of the whole upper part of the body; but we did not dare promise that patients might sit up every day. It was hardly to be expected that such a luxury could safely be granted to a man with fracture of the longest bone in the body. Yet time and experience have demonstrated that in nearly all cases patients may sit up as much as they please, not only without detriment to the reparative process, but with absolute advantage. The limb being already extended to its normal length, and properly supported by the splints of coaptation, and the pelvis nicely kept from lateral or other displacement, when the patient assumes the sitting posture, the ossa innominata roll easily upon the heads of the femurs, and what little muscular motion there may be in the confined limb, seems rather to mould the fragments more perfectly into place than to exercise any disturbing influence. We have met with exceptional cases, when the fracture was at or near the cervix, in which the patient had no desire to sit up.

Again, this apparatus is as useful in compound as in simple

fracture, and when the wound is extensive, and upon the outer aspect of the limb, all the modification necessary is to saw out a piece of the long splint, and reconnect the remaining parts with an arch of iron thus: leaving the wound perfectly accessible.

Again, the bed-pan arrangement proves of such utility that, substituting a short splint for the long one, we now use the apparatus in many cases, where no extension is required, and, indeed, where no fracture exists—simply as an invalid bed. In this way it is particularly valuable in all cases where absolute rest is desired for either or for both of the lower extremities. Formerly we used as thick a mattress at the foot as at the head of the bed, and introduced the bed-pan, through an opening formed by withdrawing a section of the mattress. We now use a thin mattress under the limbs, spread upon a wooden platform. This platform is of equal height with the cushioned platform, which constitutes the central part of the apparatus, and is made with hinges so as to fold, for convenience of packing. By this slight modification we have gained much. The bed-pan may now be passed under the platform from either side, and more equable support is given to the injured limb. The long splint is also made in two pieces, and may be lengthened or shortened at will. The arch of iron connected with the long splint, and the supporting rod running from this to the cross-bar, were devised when we used the thick mattress beneath the limbs. Then some special support to the injured limb was very necessary, and although this necessity is in a great measure superseded by the uniform support afforded by the wooden platform and thin mattress, which we now use, the utility of this extra appliance is often apparent in preserving the parallelism of the inner and outer splints, and keeping the whole limb in a more comfortable position, and also in preserving more perfectly the arched form of the femur; for let it be observed, the bandages which are tied over the rod, may pass round the limb either externally or internally to all the splints, or both externally and internally.

Dr. John Watson, of the New York Hospital, observing that the perineal strap of one side sustained nearly, and at times, all the counter-extending pressure, remarked that we complicated the apparatus by using two. Here I may observe, that if the patient were always in the recumbent position, the second pad might be dispensed with (though even then I cannot concede, that it would be entirely useless); but when the erect posture is taken, the extra pad becomes important, both for the comfort of the patient and to keep the bilateral axis of the pelvis as nearly as possible at right angles with the shaft of the femur.

It will be readily seen that the essential counter-extending pad is the one on the side corresponding to the fracture. This, of course, should never be slackened except by the surgeon; and if the patient or his friends show a meddlesome disposition, a small padlock will perfectly secure the strap. The pad upon the other side may however be slackened, or removed and replaced by the nurse, ad libitum.

We are far from desiring for this apparatus a place which it does not merit; and therefore we still invite, as we have ever done, the criticisms and comments of surgeons. I have heard a theoretical objection suggested which I will notice. It is that the firmness of the central cushion might cause sores over the sacrum; to which we answer, that we and others have treated cases ranging from nine to seventy-six years of age, and no such difficulty has ever threatened, nor is this surprising when we recollect that the pelvis, though fully secured against all injurious motion or displacement, is not however so confined as to prevent the patient from relieving an irksome position. The side splints make no pressure against the hips, but are merely in apposition thereto, and firmly fixed. The patient does not feel that he is much confined. Moreover, he can lie perfectly flat, or he can allow his shoulders to fall below the level of his hips (thus at the same time lessening the pressure of the perineal straps, and slightly elongating the limb), or he can have his pillow high, or, as already mentioned, he can sit erect—a happiness never before granted to a patient with fractured thigh, unless all hope of ossific union were given up. It is therefore easy to see why no injurious or painful pressure comes upon any part; and while all this liberty is given to the patient, we can affirm, not only that the union of the bone is not prevented or retarded, but that it is in a great degree promoted, inasmuch as cæteris paribus, every thing which conduces to health and comfort, must have this tendency.

There is not, and cannot be, any apparatus which will obviate the necessity of watchfulness and skill on the part of the attending surgeon. Nothing can supply the place of good judgment. All the aids and appliances in the world are nothing to the surgeon without this. It is utterly impossible to express by words, written or spoken, just how tight bandages should be applied, how early or how forcibly the limb should be extended, how often dressings should be re-adjusted, in what cases it is best to use a posterior splint and in which to omit it. These, and a thousand other points, are necessarily left to the judgment and skill of the attending surgeon, and upon them depends his responsibility, his reputation, and the welfare of his patient.

Case 4.—Daughter of Rev. Dr. ——; aged 9 years; of very feeble constitution. Had sustained several fractures previously. Has congenital malformation of both legs, giving the appearance of an anchylosed knee about four inches below the natural joint, and presenting an angle of 90° with the vertex in front.

Nov. 7th, 1857.—Fell heavily upon the floor while running, and fractured the left femur just above the middle. I was called to this case by my friend, Dr. Mulhallon, of this city. Crepitus distinct; considerable displacement. I placed the limb over a pillow, and directed evaporating lotion. On the third day applied our apparatus. Owing to the deformity, the adhesive plaster could only extend from the point of fracture to the angle above mentioned; yet it worked well, and the result was, after six weeks, perfect union and a better parallelism between the two limbs than had before existed. Of course, no inferences could be drawn from this case, in reference to the effect of treatment upon the length of the limb, the other thigh and both legs having been before fractured. Yet this case is valuable as showing the applicability of the apparatus to cases in young children—particularly in connection with the fact, that she was allowed to exercise all the freedom of motion of which she was capable—the only precaution being to present her playthings to her as often from one side of the bed as the other, to prevent any continued inclination of the pelvis to the right or left.

Case 5.—Chief Justice ——, 76 years of age; treated by Dr. Hoffman, a surgeon of eminence in the city of New York.—This case is one of interest from every point of view; but especially, as literary old gentlemen, of nervous temperament, are always hard subjects for any sort of restraint.

The fracture was somewhat above the junction of the middle and upper thirds, was very oblique, and the fragments much displaced. The injury was caused by slipping down a flight of stone steps; the limb was much contused, and shortened two inches and a half. Our apparatus was applied on the 9th day. The swelling was still great, and ecchymosis extensive. The limb was gradually brought down as nearly to its normal length as seemed compatible with comfort and safety. The dressings were re-adjusted two or three times in the course of six weeks; at the end of which time (seven weeks and two days from the accident) it was found firm union had taken place with shortening of only one inch, and no deformity. The Judge was as comfortable during the whole course of treatment as one in his feeble state could possibly be; and when removed from the apparatus to an ordinary bed, he found the change so unpleasant that his surgeon had him replaced upon the frac-

ture-bed at his own request. Various causes, not essential to this report, combined to prevent the patient's walking for several weeks after the bone united. He finally moved about, and used his limbs very well.

Case 6.—Fracture within the capsular ligament. Patient about fifty years of age; suffering at the same time with a fracture of the radius and ulna, and also, during his confinement, had an attack of pneumonia. This case was treated at the Troy Hospital. Dr. C. L. Hubbell, attending surgeon, says: "I did not expect to get union, but thought, nevertheless, I would try the new apparatus. No union took place, but the patient is able to walk about with one cane, and his locomotion is as good or better than that of any one I have ever seen who sustained that fracture. I think the chances of getting union in these fractures would be much greater with the use of your apparatus than with any other, on account of the advantage gained by giving firm and comfortable support to the femur at its middle by the suspensory arrangement; thus avoiding the dragging downwards and backwards of the limb, which must necessarily take place without it, although extension in any form were adopted at the same time."

Again, he says: "We shall be glad to make use of your apparatus whenever opportunity offers, and recommend it to all who treat fracture of the thigh or pelvis."

Case 7.—Of this case I have not a full record. It was treated in the hospital at Buffalo. Dr. F. H. Hamilton, whose words are always cautious, writes as follows: "I can only say, in brief, I have used your apparatus once, and with all the success which I shall ever expect from any apparatus when used in a similar case. The patient was an adult, a laboring man, and the thigh is shortened half an inch. It is not apparent in his walk; can only be detected by a careful examination with a tape line."

The doctor then proceeds to say: "This same result I have obtained in other cases, and with other apparatus." And again: "With children, however, I have frequently obtained union, without any appreciable shortening." Again, speaking of our apparatus, he says: "I have before said to you that I admire its construction, and that I am satisfied that it possesses many excellences which will make it a very useful instrument. I am not yet prepared to say that it is the best in use. Of this I am not certain. Yet no doubt it is among the best; and it would not surprise me if experience should show that it were the *best*."

Prof. H. is the highest authority in this country upon the subject of fractures and dislocations, and I have quoted his

expressions in full, in order to show that I have no disposition to overrate our method of treating fractures of the thigh. It is proper here to remark, that we sent an apparatus to Dr. H. before we made the last improvement, but we hope to furnish him with one, presently, in its perfection.

Case 8.—Miss ——, aged 40, of feeble constitution, had curvature of the spine when a young girl. In February last made a misstep and fell from a chair upon a stone hearth, fracturing the left femur obliquely at the junction of the middle and upper thirds. Dr. Harcourt, of Staten Island, took charge of the case, and called me to see it with him. We applied our apparatus on the fifth day. The patient prophesied that it would be a "long case," if it ever got well, for she judged from the experience of the family—her brother having sustained a fracture of one leg in the early part of last year, and getting firm union only after seven or eight months. Before the apparatus was applied, the limb was two inches shortened. It was gradually extended to full length, and retaining perfectly the normal position, was not redressed till six weeks had elapsed, during which time she continued very comfortable. Upon examination, the union was found to be only ligamentous. Apparatus re-applied. Limb examined from time to time. Union becoming more and more firm till the fourteenth week, when, supposing we had effected all that we could by extension, we removed the patient to an ordinary bed, and applied a splint made of pasteboard. After one week it was found the limb had retracted an inch, and the patient finding her new quarters by no means as comfortable or convenient as the old, she was replaced upon the fracture bed, where she still remains (August 1st), sitting up daily. Her health has never been good. Has suffered considerably from costiveness, leucorrhœa, and menorrhagia. The union of the fracture seems to become more and more ossific, though she is not yet able to raise the limb from the bed. The phosphate of iron was prescribed, and afterwards the compound syr. of phosphates, but her system does not tolerate anything of the kind. Dubious as this case seems, when we consider the precedent established by a similar case in the same family, and the fact that the union, though slowly, has steadily increased in firmness, we are not without hope of a useful limb. May we not reasonably question whether, in a less retentive and less comfortable appliance, union would have taken place at all?

Case 9.—Miss ——, aged 13. Nervous and sensitive in a marked degree. While at play, fell over the balustrade, a distance of twenty-five feet, striking upon a hall table, and then

upon the floor. She was taken up insensible, and continued so for many hours. When the effects of the concussion passed away, the only fracture was found to be at the cervix femoris of the left side. Dr. Willard Parker, of New York, took charge of the case. He used the straight splint (Physick's Desault). The counter extending pad, though used with all the caution and judgment for which Prof. Parker is so justly celebrated, was badly borne; causing excoriation and pain. Somewhat more than three months elapsed, and no union took place; whereupon he recommended a trial of our apparatus, and being himself much engaged elsewhere, requested me to take charge of the case. I did so; Dr. P. making an occasional visit to observe its progress. Our apparatus was first applied on the 11th of March, thirteen weeks after the accident. During the seven weeks next succeeding, the patient was perfectly comfortable, except that she complained slightly of the counter extending pressure upon the perineum, which was rendered morbidly sensitive by the previous pressure. This prevented so great extension as I should otherwise have made, and at the end of the period mentioned it was found that perfect union had taken place, with a shortening of about an inch and a half. Anchylosis of the hip had taken place, and there was also great immobility of the knee. She now (Jan. 1st) walks without crutch or cane, and is daily improving in her gait.

The next case was treated at the New York Hospital, under the care of Dr. John Watson, attending surgeon, and Drs. Ray and Baylis, house surgeons. There is, perhaps, no institution in the world where fractures are better treated than in this hospital. The following history is taken from the record:

Case 10.—Andrew Badecker; aged 45; Germany; carman; admitted January 12, 1858. (Dr. Watson.)

Patient was loading his cart, when the horse suddenly wheeled round and backed, crowding his right thigh between the tail-board of the cart and an upright wooden pillar, causing a simple and nearly transverse fracture, by direct violence, just above the condyles. Moderate contusion; crepitus distinct; shortening, one and one half inches.

Treatment.—Decubitus: limb on double-inclined plane.

13th.—Slight swelling of knee-joint. No tenderness.

16th.—Shortening two inches.

16th.—Put up this morning in Burge's apparatus.

25th.—Apparatus re-adjusted.

Feb. 22d.—Thigh examined. Union firm; no deformity; no shortening. Patient can raise the limb from the bed. Apparatus re-applied. Patient has sat up in bed while eating, every day since the first three days.

March 1st.—Apparatus removed; limb examined. No shortening; firm union.

March 17th.—Discharged cured.

Case 11.—Was treated in the same ward as the preceding, under the care of the same house-surgeons, while Dr. Halsted was attending surgeon. The following is the Hospital record.

William Smith; aged 30; Ireland; laborer. Admitted March 5, 1858. (Dr. Halsted.) One hour ago, while patient was loading a cart, a keg of white lead, of 2 cwt., rolled off the truck and over his right leg and thigh, causing an oblique fracture of the latter, at junction of middle and lower thirds, the lower fragment projecting inwards. Crepitus and false point of motion. Shortening one and a quarter inches. Not much contusion. General health good.

Treatment.—Placed limb on double-inclined plane.

7th.—Increased swelling. Considerable effusion into the knee-joint. Ordered infus. senna, comp. ʒiv., which operated freely. Ordered lotio. evap. 8th.—Swelling and effusion increased. 13th.—Ordered straight apparatus. Shortening one and a quarter inches. 15th.—Fluctuation and swelling in knee joint increased; has occasional stabbing pain in it. Tenderness on either side of the lig. patellæ. 23d.—Limb examined to-day. Little or no union; shortening one and a half inches. Limb placed in Burge's apparatus, and brought down to normal length. Still some fluctuation in the joint.

April 5th.—Position good. 14th.—Apparatus re-adjusted; fair amount of union; no deformity; shortening three-eighths.

May 1st.—Apparatus removed; firm union; no deformity; no shortening. Slight stiffening of the knee joint; is barely able to raise the heel from the bed. Ordered coaptation splints, and bandages to the limb. 8th.—Raises and moves the limb with ease.

Case 12.—Also at the New York Hospital, in the first surgical division, under the care of Dr. Shrady. (Dr. Halstead attending surgeon.)

Alexander McCrodden; aged 24; Ireland; laborer. Admitted April 19th, 1858. Shortly before admission, while attempting to raise a large piece of flagging, along with some others, it slipped from his grasp and struck him with the other edge, just above the knee, causing a fracture at the junction of lower and middle thirds of the femur. It is very oblique in its character. There was some suspicion of fracture through the condyles, but this was not made out. Considerable swelling; shortening one and a half inches.

Treatment.—Limb placed on double-inclined plane, and evap. lotion employed. 26th.—Had to-day an attack of hemop-

tysis. Has had cough for some time. On percussion marked dullness was detected under left clavicle; local crepitant *râle;* vocal resonance marked; general condition good; appetite good; sleeps well, etc.

May 6th.—Burge's apparatus applied. Shortening three-fourths of an inch (after extension).

June 5th.—Apparatus taken down and re-adjusted; union quite firm; can lift his leg with ease; no shortening whatever.

June 11th.—Apparatus removed; no shortening; can elevate and rotate the limb with ease. Limb placed on double-inclined plane. 20th.—Up and about, on crutches. 29th.—Discharged cured.

Case 13.—I will report this case in the words of E. Krackowizer, M.D., of New York, who was the attending surgeon: "William Strauss, of 593 Fourth street, New York; between 8 and 9 years old; fell, September 18th, 1857, from a distance of about eight feet, and beside other slight bruises, sustained a simple fracture of the right thigh in its middle. I put him, September 22d, in your apparatus, which answered my expectations in every particular. I never felt so free from anxiety about a good result, in treating a fracture of the thigh, as in this case. The dressing was renewed once on the 13th of October. The apparatus was removed entirely October 27th. The union was firm; the fracture had united without the least shortening. The shape of the limb a couple of months afterwards was as perfect as that of the uninjured limb."

We shall continue these reports from time to time.

BROOKLYN, N.Y., August 1st, 1858.

ART IV.—*Remarks on the Employment of Pessaries, with the Description of a new Instrument.* (With Illustrations.) By E. NOEGGERATH, M.D., of New York.

THE more intractable a disease has proved to treatment, the greater is the number of so-called infallible remedies proposed against it. This is true of prolapsus uteri. Every year, almost from the days of Hippocrates, has enriched our uterine armamentarium, and still the mystery seems to be undissolved. There are two classes of practitioners, one of which being disgusted with the host of mechanical appliances now adopted, and now rejected, has almost entirely abandoned the application of pessaries; while the other treats the slightest deviation with a mechanical support. Though the latter do more harm than the former, neither of them proceed upon correct principles.

As a general rule, it may be stated that the application of

pessaries, in cases of partial prolapsus or descensus uteri, is more injurious than beneficial. But as soon as the neck begins to appear externally, or descends even lower, the question arises, whether we shall resort to mechanical means of support or not. The answer depends upon the judgment and education of the attending physician.

As it is not my intention to write an essay on the treatment of prolapsus uteri, I will only mention those circumstances in general outlines, which imperatively demand, and fully justify the use of pessaries.

1. Prolapsus in that portion of society, where it is most commonly met with, viz., in poor women, who have neither means nor time to undergo a complicated course of radical treatment.

2. Prolapsus of a very long standing, where the causes may be removed by careful management, while their effect upon the falling of the womb, resists every other means.

3. Those cases of prolapsus, not unfrequently seen even in otherwise strong and healthy women, where the most thorough examination is unable to detect anything apart from the normal state besides a relaxation of all the apparatus supporting the womb.

In admitting the necessity of using the pessary under the circumstances just mentioned, we exclude entirely from consideration the comparative value of the bloody operations for prolapsus. When we attempt a final solution of the question, whether the average number of subjects operated upon, are permanently benefited by it or not, we are overwhelmed with the most contradictory reports of its value. Moreover, the greater number of practitioners are called upon to treat cases not in the hospitals, but private patients, who claim a right to dispose of themselves just as they choose. And most of them are alarmed at the very sight of a bistoury.

Admitting that a pessary is required in a given case, the important question occurs, what kind is to be chosen? The requisites of a good instrument are as follows: 1. It must retain the womb in or near its natural position. 2. It must neither irritate the womb, nor the vagina. 3. It must not interfere with the patient's moving round, sitting, or the excretion of urine and fæces. 4. It must be composed of a substance which resists the corrosive influence of the secretions from the genitals. 5. It must be constructed so as to be easily introduced, and removed by the patient herself. 6. It must be as cheap as possible.

The different pessaries may be divided into two sections, viz.: those which support the womb directly, and those which support it indirectly, by elevating the vagina. Until late years,

only the former class was exclusively applied, as this idea most naturally suggested itself at first sight. They are divided again into the *stalked* and *unstalked*, the former being in use ever since medical science was established. Both are intended to give a direct support to the fallen uterus. Later researches seemed to show that the chief and most natural support of the uterus was presented by the vagina, and in this view surgical operations as well as instruments were invented, and as it seems successfully applied for the cure of prolapsus.

The first man who clearly followed this indication in constructing his pessary, was Professor Kilian, in 1846, and he called it *elytromochlion*, *i. e.* vaginal supporter.

His instrument (see fig. 1) consisted of a thin steel-spring, 4″ long, the points of which ended in wooden buttons, and the whole of it was covered with a thin layer of india-rubber. In introducing the instrument, the ends of it are approximated to each other, as much as is required for its easy introduction into the vagina. This position is represented by the adjoining figure, while it forms a straight line, when at rest. In applying it, it must be elevated in the direction of the lateral diameter of the vagina, while its convex portion is directed towards the anterior wall of the pelvis. The instrument thus bent is gently pushed upwards, so that its points take a position to the right and left side of the uterine neck, as high up as possible in the laquear vaginæ.

Fig. 1.

The elytromochlion, of Kilian, has been applied successfully in some cases, thus proving that the theory of its construction was based upon sound principles. I have been acquainted with a lady, who wore this instrument with the utmost satisfaction for four years, while every other kind of pessary disagreed with her. Still the instrument has been abandoned by the profession, owing to the fact, that very few women can bear the pressure, which it necessarily must exert, in order to sustain itself in the vagina, while it is easily displaced when the spring is of a weaker tension.

In 1853, Dr. Zwank, of Hamburg, published his new *hysterophor*. It consists of two ovoid thin pieces of metal, covered with india-rubber, or of wood, connected on one end by a joint. In the neighborhood of this joint, on the external surface of the wings, is a metallic pin on each side, two inches long, which can be screwed together at the lower end.

In applying the instrument, the wings are approached as much as possible (fig. 2), and introduced, so that its convex

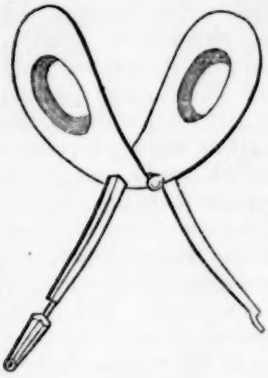


Fig. 2.

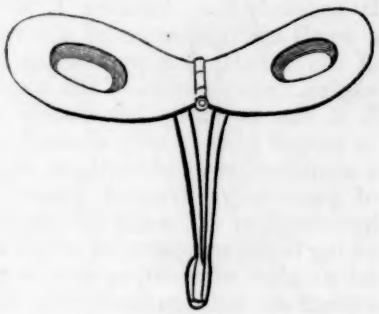


Fig. 3.

portion is turned towards the os sacrum and pushed upwards, as high as possible, towards the anterior portion of the laquear vaginæ, in front of the cervix uteri. Afterwards, the lower ends of the metallic handles are compressed, and fastened by the screw (see fig. 3). In this position the instrument is retained by itself.

About the same time, Dr. Schilling, of Munich, invented quite a similar instrument to that of Zwank; the only difference being that the movement of the wings is effected, and can be regulated by the screw at its lower end.

The purpose of both instruments is to expand the lateral portions, and sustain the superior wall of the vagina, thus preventing its inversion, and, consequently, the dragging down of the uterus.

Dr. Zwank's invention was received enthusiastically by the profession in Germany. Such men as C. Mayer, Chiari, Braun, Scanzoni and Breslau, thought it of sufficient importance to publish their observations in favor of this instrument, and at the present time it has actually supplanted all of its kind.

What is the reason of this? Is it because the profession seized upon the instrument because it was a new invention? Is it because an instrument was wanted? or is it because it proved to fulfill what it claimed? It is not our intention to discuss the question whether the vagina is the principal medium by which the uterus is retained in its position, but one fact is undeniable; viz.: the best method of replacing a prolapsed uterus is to run the fingers upwards along the posterior surface

of the ossa pubis. This act is imitated by the introduction of Zwank's hysterophor.

The question which we propose to consider, is whether this instrument has any advantage over those other means, the principle of which consists in supporting the uterus directly. It certainly has; because 1, it is lighter; 2, it touches only a small circumference of the vagina, and scarcely any portion of the womb, thus preventing irritation and ulceration of the vagina, incarceration of the uterus, fluor albus, uneasy feelings; 3, it can be easily introduced and removed, easily brought to its proper place, easily cleaned by the patient herself. This is a combination of advantages, sought for in vain among the host of previously invented pessaries. On the other hand, the hysterophors of Zwank and Schilling have some disadvantages, owing to the substance of which they are composed. The greatest number of them, as now in use, are covered with a coat of vulcanized india-rubber. The discharges of the vagina destroy it in a very short time. After this has been done, the metallic portions begin to rust and decay, thus irritating the vulva; the furrows of the screw at the lower end of the instrument begin to crust, or the screw, if turned too firmly, cannot be untwisted. Some patients have little dexterity, and do not know how to manage the screw at all. An illustration of these facts I am seeing daily, in the case of a lady belonging to the first class of society. She is the widow of a well-known physician of this city, and has suffered from prolapsus uteri ever since her first confinement, many years ago. The most thorough examination is unable to detect anything abnormal about her genital organs, except prolapsus uteri. She has been under the very best treatment of general practitioners and uterine specialists. Everything has been resorted to, to effect a radical cure, and all kinds of pessaries employed, but in vain. At length, one of Zwank's pessaries was suggested. She has worn it now for a year, and is perfectly satisfied; the only drawback being the loss of the india-rubber coating and the rusting of the metallic skeleton.

In order to avoid these inconveniences, Dr. Eulenburg, of Coblenz, modified Dr. Zwank's pessary, and described his instrument in a short thesis, in 1857. It is made entirely of boxwood, and its wings are a little differently shaped, viz.: they are slightly curved downwards at both ends, so that the lower side forms a concave surface. In consequence of this shape, the lateral branches closely adapt themselves to the inner surface of the ramus descendens ossium pubis, thus presenting a kind of hook, which gives a strong hold to the instrument when in the vagina. Both wings move in the centre part by two joints,

thus leaving a hole in the middle, through which the secretions of the vagina are allowed to escape. Instead of the screw, Dr. Eulenburg perfected the opening and shutting of the wings, by means of an elastic india-rubber ring, which runs in a channel around the body of the hysterophor, immediately below the two joints.

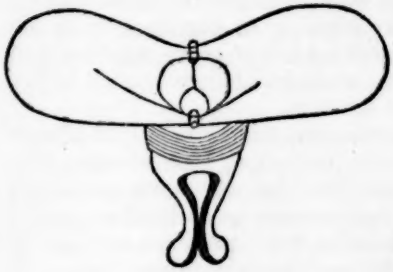


Fig. 4.

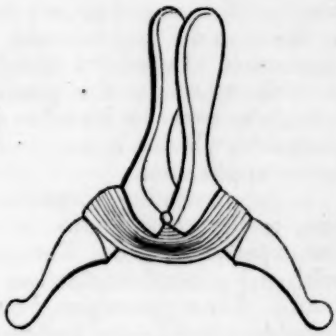


Fig. 5.

By this contrivance, the introduction of the instrument is greatly simplified, and as it shuts on its own account, by the elasticity of the india-rubber ring, its application becomes very easy, thus requiring not the least ingenuity upon the patient's part. (See figs. 4 and 5.) As every particle of metal is avoided (except the small pin, running through the joint), and as the box-wood resists more than any other substance the corrosive influence of the vaginal discharges, it is lighter, will keep longer, and will cause less irritation than the other instruments.

The author found *four* different sizes, fitting to the greatest number of cases, viz.: for the measure from side to side, $2\frac{3}{4}''$, $3''$, $3\frac{1}{4}''$ and $3\frac{1}{2}''$, and correspondingly the largest antero-posterior diameter of every wing, $1''$ $3'''$, for the two largest sizes, and for the following, $1''$ $4'''$ and $1''$ $5'''$.*

The first application of the instrument ought to be performed by the physician himself, who has to choose the size required for every case. His judgment will be conducted by the sensation of the patient, after walking to and fro for awhile, and more so, by the way in which the india-rubber ring contracts. If the extravaginal portion is not shut entirely, the instrument is too large, and has to be removed; if it shuts too quick, a

* Our industrious truss maker, Mr. W. Heynen, of 329 Canal street, has modified the construction of the joint, after my suggestion, so that the pessary can be easily taken in two lateral pieces, thus allowing a more thorough cleansing, while even the small metallic pin of Dr. E.'s pessary is avoided.

larger one must be chosen. The following duties devolve upon the patient herself, viz.: removing and cleaning it at bed-time, and readjusting it before getting up in the morning. This is performed by seizing the buttons at the lower end, and while separating them from each other, as much as possible, the other end of the instrument is to be gently introduced into the vagina till it cannot go any farther; and (when left alone) now it shuts on its own account. The same way is followed in its extraction. Before its introduction, it ought to be well oiled. In order to render this pessary even more harmless, it is advisable to cover its branches with a kind of glove, made of soft deer-skin, which coat may be moistened with cod-liver oil before every application.

In recommending these instruments, and especially the latter one, to the consideration of the profession, I am sustained by the experience of our European brethren who have used them with such general satisfaction, that scarcely any other form is now in use. For my own part, I avoid the use of pessaries as much as possible. But I have had under my care a number of cases, in which a pessary was the only means justifiable. I have tried a great variety of them, and have now come to the conclusion that Zwank's (or Eulenburg's) hysterophor answers better the requisites of a good pessary than any other.

I therefore ask practitioners to give it a fair trial. I do not mean to buy a hysterophor, and sell it to the next woman with prolapsus uteri, but after carefully selecting the case, in which nothing but a good pessary will give sufficient satisfaction, let the different sizes be tested, until the proper instrument is found.

There are philosophers, in our profession, who think it more scientific to abstain from the use of such every day things as pessaries. What do they recommend instead? A so-called radical treatment, or a surgical operation, or a bandage to be applied externally. What is the result? They lose their patients, who losing confidence in their attendant, buy a pessary for the falling of the womb on their own account. I know of several instances where this has happened. I would urge these men to give it an unprejudiced trial, and I am sure they will be satisfied.

101 West 26th street.

ART. V.—*Practical Observations on the Yellow Fever, as it has appeared in Galveston, Texas.* By F. BACON, M.D.*

ALL competent evidence bearing upon so vexed a question as the character and relations of yellow fever, is, I trust, acceptable, even though it be merely cumulative and furnish no new facts. It has happened to me to have experience of two severe epidemics of yellow fever, and also to see certain sporadic cases, and numerous cases exported from an infected into a healthy region, and I appear simply as a witness of these facts. There are probably few present who are not at least as familiar as I am with the literature of the subject, so that clearly, if I am to be in any way useful or interesting, I must attempt no elaborate disquisition, but must confine myself to the practical results of my own personal experience.

I may remark at the outset, that if my statements should sometimes seem to conflict with those of many excellent authorities, such discrepancies may be partly explained on the ground of the peculiarities of those epidemics which I have witnessed; and, while I do not discredit the observations of others, I still speak with positiveness of what I have myself seen.

My first acquaintance with yellow fever was during the epidemic which prevailed along the Gulf coasts in 1853, which was acknowledged by all who saw it to be of unusual violence, and to possess some other striking peculiarities. As precisely the same features were exhibited by the epidemic of the following year in the same localities, and, so far as I can learn, by the fever which in 1855 desolated Norfolk and has since menaced more northern cities, they may be considered as characteristic of the present prevailing form of the disease, and will be described in the course of my remarks.

The conflicting statements of various authors having left so rudimental a matter as the regular type of yellow fever a moot question, it may be proper for me to say a few words upon that point, as I have seen it illustrated. It is curious to see the attempts which have been made to force into strict nosological bounds these great epidemics of yellow fever which have had so vast a range of time and space. The perplexed student is tempted to give up nosology in despair, when he finds different authorities classifying ostensibly the same fever as *causus*, as *typhus*, as *febris continua* and as *febris remittens*,

* This paper contains the substance of some remarks offered by invitation to the Academy of Medicine at its last meeting. They were hastily prepared, with no intention of publication, and this fact must apologize for the want of systematic arrangement, or for any expression unworthy the deliberate dignity of print.

to say nothing of minor differences and subdivisions. But we must consider that in these matters, essential unity is not necessarily uniformity; and it is noticeable that the nosologists have generally received their notions of yellow fever at second-hand. In spite of seeming discrepancies of classification, I doubt not that this fever, whenever and wherever we meet with it, from its earliest appearance in medical literature down to the present time, in the towns of peninsular Europe, on our own Atlantic seaboard, around the borders of the Mexican Gulf, or in its latest discovered field, the coasts of Brazil, is essentially one disease. It is a disease of the strongest and most unmistakable individuality.

We see everywhere substantially the same mode of attack, the same duration of the disease, and the same pathological changes, especially the general colliquative and hemorrhagic tendency, which must be regarded as a grand essential characteristic of the malady; and the fact that the stress of the disease, whatever other organs may suffer, always falls upon the stomach. So that these conflicts of the nosologists must be regarded as evidences that they have not apprehended the true specific defining features of the disease, as the basis of classification.

To furnish an unexceptionable scientific definition of yellow fever, the nosologist must exclude numerous phenomena, some of which are present in one epidemic, others in another, but all in none; so that perhaps no single epidemic shall exactly conform to the ideal type, all diverging more or less in one direction or another, but all possessing the specific features in common.

Now the majority of testimony in the books is to the effect that yellow fever is a disease of one paroxysm; that the original pyrexia having lasted for a period varying from 24 to 72 hours, subsides, and is not renewed. Well, take the typical, the *model* cases of the disease, and this is true. But then many authorities go on to declare that never, in legitimate yellow fever, is there any renewal of pyrexia, and my experience in this regard is that the assertion is very far from being true. I have seen many cases in which there was a distinct iteration of the original pyrexia. I have seen other cases again, where, after the lapse of even the 72 hours assigned as its extreme limit, there was no proper subsidence of febrile action, but rather a conversion of it into a typhoid form, continuing throughout the disease. And these are not the proper cases of *complicated* yellow fever—complicated with the ordinary endemic periodical fevers. These complicated cases, where yellow fever supervenes upon ordinary intermittent or

remittent, are also common enough, and sufficiently well marked, and are of great severity. We often see even pleurisies and pneumonias, in a miasmatic locality, assuming an intermittent action, so that similar appearances occasionally observed in yellow fever should be no argument against its properly monoparoxysmal character. But the other class of cases of which I speak, cannot be reasonably explained on the ground of coöperation of the causes of ordinary periodic fevers and the cause of yellow fever, for many of them occur in subjects not suspected of previous taint of miasmatic poison.

These cases are sufficiently distinguished again from those in which true relapse occurs, being produced by some palpable external cause, after convalescence has fairly commenced. The frequency of relapses from convalescence was generally remarked as one of the peculiarities of the epidemics of 1853 and 1854. Such instances were certainly much more common than the books had led me to expect, and were considered almost desperate.

Now, I insist upon this class of cases, in which there is a renewal of the original febrile paroxysm, not as typical, but as exceptional; but still so numerous and so obvious as largely to qualify the assertion that there can be but one pyrectic period in yellow fever, and to lend some color to the views of those who have described it as a remittent fever. Some writers have seen fit to create a number of species of yellow fever, according as the brain, the liver, or the intestines suffer more or less in connection with the stomach, but it is unnecessary to dwell upon these refinements here. The only division I should wish to make for practical uses, is into (not to quibble at words) inflammatory and congestive.—I have spoken thus much on this point of the type of yellow fever, because when I used merely to read about it, the discrepancies of authors were the occasion of extreme perplexity to me.

"What is the mode of propagation of yellow fever? Is it contagious?" These are troublesome and dangerous questions, about which I wish to say as little as is becoming; for I know but one instance on record of two disputants arriving at entirely satisfactory results in regard to them—that of the two medical gentlemen in Jamaica, who had an after-dinner discussion which eventuated in a duel, in which both were killed.

I need not state my opinions, but some facts which I have observed may be of service to investigators of these questions.

And first, a few words descriptive of the locality in which my observations have been made.

The island upon which Galveston stands is a long narrow strip of sandy formation, elevated from four to eight feet above

the Gulf of Mexico, of the northern shore of which it forms a part. It is separated from the adjacent mainland of Texas by a bay of salt water, which for the greater part of its length varies from one to three miles in width, but opposite the eastern end of the island, where the city stands, expands to a width of about thirty miles. The extremely loose consistence of the soil in most parts of the island forbids the accumulation of stagnant pools. Without the bounds of the city there is scarcely any heavier vegetation than the coarse grasses of the prairies. During the entire warm season a strong and cool sea-wind sweeps steadily northward over the island, with scarcely an intermission. The city is laid out with the most liberal allowance of space to the streets, is far from being compactly built, and is generally cleanly. In the year 1853 its population was about 5,000. The so-called paludal fevers do not, and I believe never did, originate in the place. But during a period of about twenty years, Galveston has suffered five epidemics of yellow fever, some of them of extreme fatality. That of 1853 probably more than decimated the number actually present during its prevalence.

The first cases of yellow fever seen in Galveston, in 1853, were brought from New Orleans. One, the first, in June, a full month before the origination of any case in Galveston. This case, like all the other imported cases, was conveyed to the hospital, at that time in my charge. The patient was kept isolated as far as possible, and certainly was not suspected of propagating the disease. About the middle of July several successive New Orleans steamers brought cases. Insufficient hospital accommodations did not permit the entire segregation of these patients. Within a week after their admission, and before any case had been announced as occurring in the city, there appeared in the hospital three marked cases of yellow fever, two being patients convalescent of other diseases, and the third a nurse. The position of the hospital is remote from the city, upon a high, dry and well ventilated spot, free from apparent local causes of disease. The first case announced as originating in the city, some three or four days after these last, was in my care, the patient being a gentleman, residing in the centre of the city, who had had frequent occasion to visit the hospital, and who had seen some of the imported cases, at the time of their admission. The physician who is so unfortunate as to report the first case of an epidemic is, of course, liable to have the correctness of his diagnosis disputed, if not to be regarded as an enemy of the public peace; but about the ninth or tenth day after the attack of this patient, the pestilence exploded, as it were, in all the denser parts of the town at once. It shortly

after manifested itself in the neighboring town of Houston, as well as in some other localities, where it had never before prevailed. It was a noticeable peculiarity of the epidemics of 1853 and 1854, that they invaded and devastated places which, by their remoteness from the great *foci* of infection, and their rural character, had previously enjoyed an immunity.

I was absent from Galveston, at the beginning of the epidemic of 1854, and so had no acquaintance with the facts from personal observation; but, although the citizens are not free from that local pride and jealousy, which so often obscure and distort important evidence, I have never heard a doubt expressed, that that epidemic was of domestic origin, the popular opinion being, that the morbific *fomites* had survived the intervening winter, which was unusually mild. If this theory was true, the *fomites* endured in quiescence several months of hot weather, as the disease was not seen until the close of July. It is worthy of remark, that in the summer of 1855, there occurred in Galveston but two or three sporadic cases of yellow fever, while it was epidemic for the third successive summer in Houston. There was daily communication between the two towns, and previously they had always suffered simultaneously. Houston had no intercourse with New Orleans or any ordinary habitat of yellow fever, except through Galveston. The origin of this epidemic was popularly connected with the demolition of an old house, the workmen thus employed presenting, it was said, the first cases. Several patients were brought thence to Galveston, and placed in the hospital, but did not propagate the disease.

The ordinary symptoms of yellow fever are familiar to you all from the descriptions of the books, and it is unnecessary that I should speak of them except in so far as they involve the point of differential diagnosis, a point which the most experienced observers admit to be one of considerable difficulty and nicety. Indeed, we may as well confess that the physician does not exist who can absolutely diagnose an *isolated* average case of yellow fever in its early stage.

Throughout the entire course of the disease, there is but one symptom which has any claims to be considered exclusively pathognomonic—the last and fatal symptom, the black vomit—and even that is so only taken in its due relation to the precurrent febrile action. I mean, that black vomit, or something very similar to it, is frequently produced, accidentally, as it were, in the course of other diseases—in gastric ulceration, *e. g.*; but no other than the *yellow* fever proceeds regularly and uniformly toward the production of black vomit.

Yet, notwithstanding the absence of any one exclusively

characteristic sign, the assemblage of phenomena constituting the first stage of yellow fever is very marked. The historical evidence relating to the case, the exposure of the patient, etc., is, of course, to be considered.

We have generally the slight rigor, by no means so decided, or so long continued as in an average case of intermittent. We have the great vascular excitement, the severe headache and circumorbital pain, the pain in the lumbar region, and in the limbs. Great stress has been laid upon some of these symptoms, particularly the circumorbital pain, and that in the calves of the legs, as being peculiar. They have never seemed so to me. It is true, they are sometimes all very intense, but I think we often see them the same in kind and in degree in cases of the ordinary remittent fever of the South. Then we have the thirst and nausea; nothing peculiar about that, certainly—except that the nausea is somewhat more constant and troublesome than in the ordinary endemic fevers. The appearance of the tongue is by no means constant or invariable; we see it assuming a great variety of conditions, the most frequent of which is, that with a silvery white or pasty centre, and red tip and edges. There is, perhaps, a full doughy feel of the abdomen, which is more constantly present in yellow fever, than in any other fever with which it is likely to be confounded.

In regard to restlessness, nervous agitation and jactitation—these symptoms are, as a general rule, decidedly more prominent than they appear even in severe cases of ordinary remittent fever.

So also, it has often seemed to me, is the disturbance of normal respiration. Frequently, in severe cases, the respiration is hurried and interrupted by deep sighs; there is a *besoin de respirer* from the very inception of the disease; a fact worthy of attentive consideration, for its relation to those anatomical changes of the blood, which, I am persuaded, are an important part of the pathology of yellow fever.

Perspiration, I have generally found easy to be excited or spontaneously occurring, soon after the cessation of the rigor, and usually abundant. The odor exhaled from the body of the patient is strong and characteristic; it is as noticeable and as peculiar, as that of small-pox, *e. g.*

But, after all, the sign upon which I find experienced and judicious observers principally relying, as a diagnostic in the outset of the fever, is (what is of all most difficult of description) the physiognomy of the patient. Sometimes his mere anguish may overpower less intense shades of expression; but, apart from this, there is a peculiarly excited and anxious aspect; the face is deeply flushed, the nostrils tense and quiver-

ing, the eyes injected, preternaturally brilliant and glittering, sometimes almost fierce. The aspect, indeed, is somewhat that of the beginning of intoxication; when the subject is properly "flushed with wine," and before he passes beyond the stage of full exhilaration, before there appears any relaxation of the features or watery suffusion of the eyes. Cases are sometimes, though rarely, seen to present a circumscribed blush, not extending beyond the cheeks, of a curious bright *powdery* pink, looking so like an artificial application, that one almost expects to remove it with a handkerchief; and this is associated with a singular shining whiteness of the sclerotic, and with persistent dryness of the skin. Such appearances are highly unpropitious.

The *tout ensemble* of these invasive symptoms of yellow fever is certainly very striking, more easily recognized than described, and, except where the physician is taken by surprise, not very liable to be mistaken for any other disease: except, that curious fever as yet rather obscure in medical literature, popularly known as the "dengue" fever.

It is a very interesting fact, that we have here a disease, showing the same tendency to extensive epidemic prevalence as yellow fever, and possessing, as I have seen it, absolutely every invasive symptom in common, which yet, after about the third day, entirely disappears, and leaves the patient to recover from simply a greater or less degree of debility. I have never known a fatal case, or one leaving any serious sequelæ. And yet, the onset of this disease is apparently no less violent than that of yellow fever. This allusion to the dengue is intended to apply to that disease only as I have witnessed it. I have no familiarity with its history elsewhere.

As the yellow fever advances from its first stage, a number of new symptoms manifest themselves, making its character sufficiently unequivocal. Ordinarily, upon the subsidence of active pyrexia, there is remarkable prostration of strength. This is frequently entirely out of proportion to the violence of the preceding symptoms. Many patients, in whom the vascular excitement has been slight, and has early subsided, are left in this state of profound lassitude, which frequently is the only remaining symptom of the disease; with proper care, they go on uninterruptedly to convalescence; but any, the slightest, imprudence or exposure during this state may be productive of the worst results. Concurrent with this physical state is an analogous mental condition, varying from mere quietude and composure to indifference, or, in grave cases, torpor. The patient may be aware of his danger, but seems incapable of feeling the emotion of alarm or distress.

Now this is just the state of things which is so deceptive to the inexperienced observer. There is an entire disappearance of active phenomena. There is nothing palpable, nothing that you can put your finger upon to treat. In any other acute disease than yellow fever it would be reasonable to suppose that the patient was fairly in the high-road to recovery. But the young practitioner leaves his patient in this state, confident of his safety, and calls the next morning to find—perhaps that the patient threw up black vomit during the night, or even that, without perceptible reason, he sank from his state of the day before, and died.

In strong contrast with these the ordinary appearances, are the unusual cases familiarly known as "walking cases," which preserve the specious aspect of strength to a greater extent than in any other fever.

In this fortunately small class of cases there may occasionally be seen a semblance of mental activity and cheerfulness even, forming a grotesque travesty of high health. I know few psychological symptoms more strange and repulsive. A very small proportion of cases exhibit violent mania, a screaming delirium, persisting to the last breath of the patient.

An inordinate and irrestible hunger is a frequent phenomenon in the second and latter stages of the disease. This, occurring before the establishment of convalescence, is a threatening symptom. It may be classed with the erotic excitement which is described by many authors as sometimes existing about the same time, but which I have never seen.

During the apyrexia, the perspiration, free almost from the commencement of the attack, often becomes profuse, even colliquative. This is an unfavorable indication. It is often associated with a small, frequent, thready pulse, coldness and deep lividity of the skin, a doughy torpidity of the features, and shrivelled extremities, while the peculiar odor of the first stage of the disease is succeeded by one insupportably disgusting—such a perfectly cadaveric, dissecting-room stench, that it seems almost a violation of chemical laws that it should be emitted from a living body. This odor alone, in the absence of other striking symptoms, has sometimes determined an unfavorable prognosis, and I consider it of as fatal import as the black vomit itself, or any other symptom. In some severe cases an extreme sensibility of the epigastric region is a remarkable and alarming symptom. This is not like the comparatively dull and deep-seated tenderness of enteritis, but it is fully as acute as that of peritonitis. Even when the patient is lying at ease, he will shrink and exclaim before he is touched, if he sees the hand of the physician approaching the epigastrium. It is the

more remarkable, as I have never seen the evidences of peritonitis in a yellow fever autopsy. This intolerance of handling sometimes seems to be rather on account of a nervous horror than of real pain, for I have had patients grasp at my hand as it approached, and then to apologize with a smile, for "being so foolish," hardly knowing what they had feared.

In regard to the yellowness, which is so prominent a feature of the disease, its value, either as a diagnostic or prognostic indication, is materially impaired by the irregularity of its appearance. Its very early manifestation is decidedly alarming; but then, on the other hand, many fatal cases do not exhibit it until after death. Its appearance about the sixth day is considered favorable; so much so, that some writers have elevated it to the importance of a critical sign. Unjustly so, however, for the majority of both mild and severe cases first show it about this time, and as in some fatal cases it is not seen until after death, so in some mild cases it is first seen, not at the beginning of convalescence, but during its progress.

The train of hemorrhagic symptoms in yellow fever is of the highest interest and importance in both the diagnosis and treatment of the disease. These hemorrhages occur in a great variety of situations, and for the most part in the second and last stages of the disease. It has never happened to me to see a spontaneous hemorrhage in the very outset of the disease, though epistaxis is spoken of as sometimes occurring early. But, during the state which ensues upon the active pyrexia, hemorrhages from the nose, the gums, the tongue and fauces, the mucous surfaces of the stomach and bowels, the uterus, the scrotum, and extravasations of blood beneath the skin, manifested by ecchymoses and vibices, are very common. When these discharges take place from the nose, the mouth, or the uterus, they are regarded by many as salutary and even critical in their effect. On the contrary, I do not consider any hemorrhage whatsoever occurring after the first stage of the fever a favorable symptom. Some are certainly less dangerous than others —a hemorrhage from the nose than a hemorrhage into the stomach, producing black vomit—but I do not believe that the nasal discharge can forestall and prevent the gastric. For these hemorrhages are strictly passive, are preceded by no *molimen hæmorrhagicum*, and, I take it, one passive hemorrhage does not relieve another. Those who attach such importance to the derivative power of these discharges should, consistently, bleed their patients when black vomit is apprehended and no spontaneous hemorrhage appears; but no one has been bold enough to propose such a proceeding at this stage.

In these bleeding cases the blood, having nearly the color

and consistence of blackberry juice, drips slowly and steadily from a free surface, perhaps for hours in succession, and in quantity to fill a large vessel, often without the formation of a single clot. It is evident that extreme tenuity of the blood combines with atony of the capillaries to give this hemorrhage its peculiar character. When it takes place from the mouth, it is usually accompanied with scorbutic sponginess of the gums. I remember one patient in this condition who easily removed a number of teeth with her fingers.

A few words in regard to black vomit will finish my remarks upon the phenomena of yellow fever. It seems curious, at first sight, that the character of this discharge should admit of such obstinate controversy. It is incontrovertibly the result of a hemorrhage into the stomach; but then it is something more than an ordinary hemorrhage, so that the objection, often urged, is well founded, that the artificial black vomit produced by the familiar experiment out of the body, is not exactly identical with the genuine article. Now the hemorrhage producing the genuine black vomit is of the same unusual character as that already described as flowing from the nose, etc. There is an alteration in the condition of the blood before it is extravasated, and it exudes from a large surface of the stomach in a peculiar manner. I have seen this neatly illustrated by some cases, to one of which I will briefly allude.

The attack of this patient was sudden and violent. He had retired early in the evening, with a slight sense of indisposition, and awoke during the night with all the early symptoms of yellow fever in an intense degree. He was especially harassed by laborious and uncontrollable vomiting. This continued for several hours, when, after a short quiescence, the attendants were surprised by the ejection of a dark-colored matter which they not unreasonably supposed to be the genuine black vomit. Its resemblance to that fluid was certainly considerable, but a closer examination showed it to contain distinct coagula. The identity of it with the ejection of ordinary hæmatemesis was further shown, when, after an hour or two from its first appearance, it was gradually replaced by decidedly red blood. This gastric hemorrhage was apparently active, and not improbably proceeded from vessels ruptured in the previous efforts to vomit. It ceased entirely after a few hours. But this same patient, at a subsequent period of the disease, a period characterized also by the occurrence of passive hemorrhages from the nose and mouth, had the genuine, unmistakable black vomit.

The black vomit is seen in different degrees of elaboration. The appearance of the dark matter is often preceded by the

ejection of a transparent, glairy fluid, containing a greater or less quantity of small brown flocculi, strongly resembling clear chicken broth. Something very similar is often seen in the gastritis following a drunken debauch. Its prognostic import is scarcely less serious than that of the coffee-grounds fluid itself.

It has happened to me to see the results of a considerable variety of treatment in the hands of other practitioners, as well as to make experiment of some diversity of means in my own practice before determining upon the most satisfactory plan.

The so called abortive treatment, with large doses of quinine early in the disease, has been so much discussed and so highly extolled that it requires notice here.

For several years previous to the great epidemic of 1853, this practice was extensively pursued and relied on in the apparently mild forms of the disease which prevailed in New Orleans, and it was commonly regarded as the grand modern improvement in the treatment of the malady. But during that epidemic the quinine practice fell into general, and I believe merited, disrepute even in that city, where it had been most enthusiastically lauded. I saw many cases in which I could not doubt that the results of this treatment were disastrous, and exceedingly few where I could fully satisfy myself of any good effects from its use, however confidently they might be appealed to as evidences in its favor. It seemed to me to be generally ill-tolerated by the stomach or the head. My conviction of the strictly self-limited character of yellow fever is so firm, that I would as soon attempt to *cure* small-pox, *e. g.* I do not believe that any remedial means can absolutely preclude the subsequent *stadia* of the disease. It is generally admitted that a single large dose of quinine, given at the outset of the disease, is much better tolerated than smaller repeated doses, or than one given after the subsidence of pyrexia; and whenever it is of real benefit, that should be attributed to the peculiar sedative effect of the remedy in the stage of vascular excitement, and not to any supposed antiperiodic action.

At the beginning of the epidemic of 1853, I saw some instances of depletive treatment. I knew several patients to be bled—they died. One of my own very first cases, before I had ever fairly seen the latter stages of the disease, I bled, and he died. I never repeated the experiment. Topical blood-lettings, cupping at the back of the neck and upon the abdomen, were very generally employed, and often to the great alleviation of pain. I regarded this as owing less to actual depletion than to the derivative action of the cups, and usually found as satisfactory effects from dry cups.

The mercurial plan I have seen very fully exemplified, in all degrees of thoroughness, from the mere use of a mercurial cathartic up to the full saturation of the system. Indeed, the employment of either the blue-pill or calomel, with one intention or another, is almost universal. The few remaining advocates of mercurial saturation repeat the assertion that "salivated patients never die," as if it were incontrovertible proof of the success of their practice. The assertion is not strictly true; but if it were, it would still be fearfully ambiguous; it may as readily mean that the patients who died could not be salivated, as that the salivated patients could not die; and the former, I am sorry to believe, is the real significance of the fact. My own persuasion is, in view of the hemorrhagic tendency of yellow fever—its essential characteristic feature—that any use of mercurials, as cathartics or otherwise, is strongly contra-indicated. We have other cathartics not liable to the same objection, which are capable of performing all the good results I have ever seen from mercurials.

The most rational and successful treatment of yellow fever, according to my experience, is eminently conservative, looking constantly to the self-limitation of the malady, and confining its efforts to the mitigation of symptoms. Perhaps, when I attempt to describe it, its unimposing simplicity of detail and apparent inertness may seem hardly worthy of your attention. It is scarcely satisfactory, indeed, that we should have before us so raging a malady, and should speak of such trifles as castor-oil and sponge-baths. But what shall we do? We have already seen how intolerant the fever is of more active interference, and we can but hope for better results from a different plan. A matter which in an ordinary disease would be trifling, may in this become critical.

The rapid progress of the disease renders every moment of importance. The means ordinarily resorted to, before the arrival of the physician, to favor perspiration, are judicious, consisting of the hot mustard bath and warm diluent drinks, the infusion of orange-leaves being a popular favorite in places where they abound. When the patient expresses a preference for cold water and ice, I do not refuse them; but I have generally found the warm aromatic drink as agreeable to the patient, more assuasive of thirst, and more readily retained by the stomach, which should be assiduously conciliated. As has been remarked, there is usually no difficulty about the production of perspiration, but it is not always followed by a mitigation of the febrile symptoms. Many cases are seen which have from the outset a moist skin, and which go on with uninterrupted moisture to a fatal termination. Torpidity of the bowels is so invariable an

accompaniment of the fever, that it is safe to administer a cathartic as soon as convenient. The use of the harsher cathartics is often productive of uncontrollable irritation of the stomach and bowels. Castor-oil or sweet oil with lime juice, where it can be retained, is from its mildness and efficiency, the most suitable. Its action may be advantageously quickened by enemata. Some judicious practitioners prefer the saline cathartics, and they certainly are sometimes of great service. If the pain or restlessness be great, and do not abate with the use of other remedies, I do not ordinarily hesitate to employ opiates, the Dover's powder being preferred. I have generally found them well borne in full doses, having immediate tranquillizing effects upon the irritable stomach and general nervous excitement, and not suspected of any more remote unfavorable influence.* The application of cups has already been spoken of. Rubefacients are often equally useful in alleviating pain, especially that of the lumbar region, which is sometimes so distressing.

The fact previously alluded to, of the profound exhaustion of vital energy, should be kept constantly in view. In no disease is absolute repose of greater importance. In cases of any severity the patient should on no account be allowed to rise from his bed. The transportation of patients from one place to another is of course a most dangerous proceeding. I will venture to repeat the remark, for its extreme importance, that this prostration is often out of all proportion to the apparent violence of the preceding fever, so that the mildest cases should be attentively watched and nursed, until beyond the possibility of relapse.

It should also be remembered, that, after the subsidence of vascular excitement, the calorific powers of the system are reduced to a minimum; so that, while perfect ventilation is secured, the patient should be guarded from direct currents of air. Even momentary exposure, by the patient's throwing off his covering, is sometimes followed by capillary stagnation, manifesting itself in blueness and lividity of the skin—a most untoward event.

The state of the skin should be carefully watched. If it is excessively hot or dry, great relief is afforded by frequent sponging with tepid water and alcohol. If the perspiration should be excessive, a more stimulating application, as of dilute alcohol and vinegar, may be of service. If inclined to lividity, brisk friction with flannels may be used.

* I cannot speak with equal confidence of the use of opium in the subsequent stages of the disease. Though it often seems to be required, and actually does all that can be asked of it, yet it sometimes fails of a favorable response from the system, and is followed by prostration and stupor.

As soon as it is apparent that there is a true cessation of pyrexia, a moderate use of stimulants is usually serviceable; and in this regard, the taste of the patient may to some extent be consulted. When the case has decidedly turned toward convalescence, porter is preferable to the merely alcoholic stimulants.

In the cases of passive hemorrhage which have been described, I place little confidence in the host of local styptics recommended. I have generally had excellent results from the free internal use of nitric acid, in combination with serpentaria or some other stimulant.

When the fever degenerates into the typhoid grade of action, characterized by extreme vascular depression, by intense dirty yellowness and lividity of the skin, by a tongue black and dry, or covered with a brown sordes, or cracked and bleeding, the remedy, beyond all comparison, and sometimes beyond all expectation, has been, in my experience, the oil of turpentine. I attribute to this remedy a threefold action, as a stimulant, as a hæmostatic, and as having a peculiar alterant effect upon the mucous surfaces. Whatever its mode of action, its curative effects in this class of cases are most remarkable.

ART. VI.—*An Account of a Case of Congenital Deficiency of the left Kidney.* By C. E. ISAACS, M.D., one of the Surgeons of the Brooklyn City Hospital; Consulting Surgeon of Kings County Hospital, etc., etc.

ON examining the body of a male infant, three months old, who had died of pneumonia, in the King's County Hospital, it was discovered that there was no kidney on the left side. On the right side, the kidney was apparently about twice its natural size, and of the usual form. Its superior extremity was in close contact with the diaphragm. The inferior portion of the kidney reposed upon the soft parts, in the upper third of the right iliac fossa, and extended as far down as the middle of the external iliac artery. The length of the organ was two inches and three quarters; its transverse diameter, one inch and three quarters; its thickness, one inch and a quarter. Its external surface presented the usual lobulated appearance of the infantile kidney. When split open by the knife, in the usual manner, its substance appeared to be healthy. The division between the cortical and medullary portions was well marked. The ureter was about twice its natural size. On the left side, not a trace of a kidney or ureter could be discovered. The left supra-renal capsule was about the same size as the corresponding one on the right side. Both occupied their usual

positions. The right ureter was traced down, to its usual point of entrance, into the bladder; and on opening this organ, the mouth of that tube only was apparent; none other could be detected. It may be remarked, that the child had always been healthy, up to the time of the fatal attack of pneumonia, and that nothing unusual had been observed relative to the functions of the urinary organs. The right kidney, from its size, had evidently sufficed to perform the duties of both; and practically it might be considered, that the two organs were consolidated into one. The specimen is preserved in the Kings County Hospital.

As a case of this kind is seldom met with, it is believed that its rarity will sufficiently justify its publication.

ART. VII.—*Remarks on the Treatment of Gleet by Local Remedies.**

By WM. OTTERSON, M. D., of Brooklyn, N. Y.

THE slight discharge from the urethra so often met with after an attack of gonorrhœa, and variously known as "chronic blennorrhagia, gleet," etc., occurs under various circumstances, and its seat, cause, and treatment, are differently given by different authors. Cooper, Vidal, Acton, Hunter, Chelius, etc., give different views of the seat and pathology of the disease, yet they all concur in the general plan of treatment—viz., stimulating and astringent injections, cubebs, terebinthinates, and speak, as a last resort, of sometimes using the bougie. We find these writers placing the seat of the disease in the prostate, Cowper's glands, the lining membrane of the urethra, the lacunæ, and in the fossa navicularis. I am disposed to think that Sir A. Cooper was nearest right, and that the glans penis and the lacunæ therein are the real seat of this affection. What the precise pathological condition of the glans is, I am unable to say; but it would appear that owing to its delicate structure, and the fact of its being the most frequent seat of acute attacks, that the onus of the chronic form of the disease should be centered upon this portion of the organ; and that many of the most obstinate cases of gleet (in the absence of stricture and disease of the prostate) are dependent upon a morbid condition of the glans, and not upon any disease or change of the lining membrane of the urethra itself. My reasons for this belief are: 1st, the amount and character of the discharge; 2d, the point of irritability upon passing an instrument; 3d, the inadequacy of injections to control the disease permanently; 4th, the failure of internal medication or hygeine to exert any special influence over it.

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* Read before the Brooklyn Medical Society.

1st. The discharge is usually found to be nothing more than opaque mucus, which may vary in consistence according to circumstances. This in the morning occupies the meatus, at times almost blocking it up, and is easily removed if the patient runs the finger along the under surface of the urethra, beginning about an inch from the meatus, when the secretion escapes; after that, the urethra may be squeezed from the prostatic region to the meatus, and yet no more of the discharge be procured. 2d. In passing an instrument, when about an inch from the meatus, and corresponding with the fossa navicularis, the patient complains of pain, and after the instrument passes this point, the whole tract of the urethra beyond is free from any irritability. This I have found as an almost invariable result in my cases of obstinate and long standing gleet, when there was no stricture. 3d. Injections of all kinds have utterly failed to make any permanent impression upon the discharge, though there have been remissions for a few days at different times. 4th. Internal remedies have failed to exert any perceptible influence over it.

If the lining membrane of the urethra were alone involved, the result of medication would be different, for we all know, that in acute gonorrhœa, many of what are called specific medicines, *do* exert a modifying and decidedly beneficial influence over the diseased tract of the canal. But in this form of gleet they fail, because their action is not adapted to the disease of this particular structure. If Cowper's glands are the seat, then the application the author makes in these cases, would appear to be useless, as the remedies are not applied to the portion of the canal where they are situated.

Treatment.—I first examine the patient to ascertain if there is stricture, narrowing of the canal, etc., and if there are any such obstructions the usual measures are adopted to overcome them. Sometimes this alone will effect a cure, but if the discharge continues, I introduce a No. 8 metallic grooved bougie, the groove being filled either with citrine ointment or calomel; the latter I prefer as being more certain in its action. The instrument need be passed only a sufficient length up the urethra to get the point beyond the glans penis, when it should be carefully revolved several times; it should be allowed to remain in for three or five minutes, and then a probe, adapted to the curve of the instrument, should be passed down the groove; if they are then withdrawn simultaneously the whole of the calomel will be left in apposition with the parts.

This may be repeated two or three times a week at the same time that the bowels are kept soluble. Upon withdrawing the instrument a little smarting may be complained of, and

perhaps a few drops of blood follow, but this is not important. If this plan of treatment is followed assiduously, you can assure your patient with much confidence that a very short time only will be required to remove every trace of the most obstinate and hitherto intractable gleet.

The writer has had quite a large number of these cases under his care, and formerly was in the habit of adopting the stereotyped practice, and have them linger from month to month, and finally to pass into other hands, but since adopting the view that *benefit can only be derived by direct alterative medication to the seat of the disease*, and pursuing the plan of treatment laid down in this paper, he has not failed to cure a single case, marked benefit arising after three or four applications, even in the most unfavorable and long standing cases.

As some authors have recommended the use of mercury, with a view to produce its specific effect upon the system, I transfer one case from my note-book, illustrating its action in this affection.

Case 1.—L. W. consulted me on account of a chancre, which I cauterized with solid nit. argent., and after giving a cathartic kept him upon blue mass and opium, until its specific action became manifest, and as there was some induration, kept up a slight mercurial action for some time by hyd. potass. and ext. sarsp. comp. This treatment being continued about two weeks, the cancer healed kindly, when, for the first time, the patient informed me that he had been suffering from gleet for about eight months, which, at the time he first applied, was quite severe, but he, thinking that the medication and regimen adopted for the cure of his syphilis, would also suffice for his gleet, did not mention it till after his primary disease was cured; but finding he was not free from his old discharge he wished further advice. I proposed the bougie, but he having been present when I had introduced it on his friend, desired that some other measure should first be tried. I consented, after giving an unfavorable prognosis. The old routine of injections, etc., was gone through, and after one month's trial he concluded to submit to the bougie. Upon examination no irritable point was found after the point of the instrument passed the fossa navicularis, no stricture or narrowing of the urethra. A perfect cure was effected in about three weeks, no relapse following.

Case 2.—J. D. applied to me on account of a gleet which had troubled him about five months, the sequel of a gonorrhœa which he had treated himself with injections and bals. copab. Upon examination, I found some narrowing of the canal just anterior to the bulb, with irritability at this point, and at the point corresponding with the seat of the fossa navicularis.

This constriction readily gave way by the use of graduated bougies, but the gleet still continued. I treated him upon the old plan for six months, during which time all the different remedies were tried, and strict rules of regimen enjoined. In this time there were several remissions, but nothing permanent. At last I introduced the medicated bougie twice a week, at the same time, removing entirely my dietetical restrictions. At the end of six weeks, although he daily drank large quantities of beer, he was entirely cured. Some may be disposed to think that this case required tonics and nourishing diet, but these had been given as one of the changes during the six months of the old treatment.

ART. VIII.—*Dr. Tully's Classification and the Principles of Therapeutics.* By JEFFERSON CHURCH, M.D., *Springfield, Mass.*

IF it should be our endeavor "to define and elucidate the principles of therapeutics," rather than "to augment the therapeutic arsenal," it is important that we should know from whence these principles come, and how they may be best brought to light. By principles are understood, those truths which are intuitively or demonstrably such, or that are capable of positive or absolute proof. In its application to therapeutics, the word must have reference to those truths which are necessary to direct us to the right use of medicines; or this is the sense in which we have concluded to understand it on the present occasion.

It will be found doubtless that the principles of therapeutics, and its systematic arrangement or classification, have a more intimate connection with each other than is generally supposed, and that as the principles become more clear and the classification is improved and perfected, the more close and intimate will their connection appear. The rationale is this: both a *true* classification and the *true* principles must have the same foundation, viz. the facts which are the objects of the science. In reality, it would appear to be the distinctions that exist between the facts, rather than the facts themselves, which are the foundation of both; for where there are no distinctions between the facts, there can be no classification of them, however numerous; and where there are no distinctions or dissimilarities in the powers and operations of medicines, there can be no principles of therapeutics. The point here raised may appear clearer as we proceed, and assume some importance; but though it seems to have been clearly perceived by Dr. Tully, it is not clearly stated by him, and he expressly says that his "classification is founded upon the different and distinct powers in materia medica;" in other words, upon the facts themselves. The point being established, however, it would require no change in his system, nor any material variation in his language or manner of presenting it; nor would it render clear, precise and accurate definitions of the facts any the less necessary, as it is only from our clear perceptions of the facts that we can get clear perceptions of their distinctions or dissimilarities. From the use

and importance of these distinctions, these are or should be as truly the objects of the science as the facts themselves; indeed, for the purposes here contemplated, they are among even its most important objects. The true principles of therapeutics, and its true classification, both originating from these distinctions, must both vary, as our ideas of these distinctions vary; and will both be improved and perfected, as our recognition of these distinctions becomes clear and perfect.

To fix in our minds, therefore, those things from which the principles of therapeutics originate, and to fix them in such a manner that we may all understand them alike, and thus be enabled to communicate clear and precise ideas of them and in the briefest manner, is one of the purposes, and the most important one, for which classification is designed. Though the best arrangement that a science admits of, must of course afford us the best facilities for discussing it, and for obtaining clear and comprehensive views of it, yet, as a test of the correctness and value of classification, we should look rather to its tendency to unfold principles, and to assist us in comprehending and retaining them.

The importance, not to say the absolute necessity of a true classification in materia medica, has not yet been fully stated, if indeed it has yet been fully comprehended by any writer. No one can estimate the value of the principles that such a classification would unfold till such a one has been presented. The urgent necessity for defining and elucidating the principles of materia medica, may be inferred from the incongruity in all our systematic arrangements of it. It may be inferred also from the growing skepticism in the efficacy of medicines, which is apparent among many leading members of the profession; if not from the confidence that is placed in the various kinds of irregular practice, as they are called, in nostrums, patent medicines and even charlatanry. Without principles, of course, one mode of practice will be as rational, if not as regular as another, and we leave it to those who are more nice in making distinctions than we are to say which is most likely to be successful. Here, at least, it would seem hardly worth while to keep up a distinction that would be only nominal. If the regular practice of medicine, so called, is not to be abandoned or superseded, or merged with the irregular, the importance of true principles or facts to guide us in the use of medicines is obvious, and the necessity of a true classification as the foundation of such principles, or the means of developing them, is just as obvious.

It is said—though it is believed by those who have never examined the work for themselves, and who cannot therefore be competent judges in the matter—that the author makes many distinctions that will never be recognized by the profession. But the error of making too many distinctions, or even of attempting to make them where there are none, will be far less than that of failing to recognize them where they really exist. As has just been intimated, it is the ignorance or disregard of distinctions on the one hand, and the recognition and maintenance of them on the other, that constitutes the difference between the quack and the regular physician. It is clear that distinctions

should be made wherever there are principles at stake; and it will be found, doubtless, that there are always principles at stake wherever there are distinctions to be recognized; and whether those made by Dr. Tully are ever to be recognized by the profession or not, the question of their utility and importance is to be examined with reference to this point. If in pathological anatomy no distinctions were made but those that give rise to some principles of practice, pathological anatomy would be narrowed to a much smaller compass than at present: and if some microscopic achievements, to which much importance is attached, were to be brought to this test, they would dwindle to insignificance. Should it be said that these distinctions and these achievements, though apparently useless at present, may yet become the foundation of important principles, will not the same plea in behalf of useless therapeutic distinctions, even if Dr. Tully makes such, be sufficient and valid? And yet the most indefatigable seekers after distinctions in pathological anatomy are the first to discover a superfluity of distinctions in therapeutics. That there is so much interest felt at present in pathological anatomy upon which so few principles of practice are, or can be, established, to the neglect of therapeutics where all is practical, or may be, seems unaccountable. But it seems superfluous to insist upon the importance of recognizing distinctions wherever they are; but in physic, as in every thing else, it is profitable occasionally to go back, and examine first principles.

But it was our purpose to illustrate the truth of the proposition with which we commenced, or to show more fully the intimate connection between the principles of therapeutics and its classification; and here we shall be obliged to refer again to Dr. Tully's classification, which may be profitably referred to again and again for this and other purposes. Having fulfilled this to the best of our ability, we may have occasion to refer to it again for another purpose; for our own profit, if not for the profit of others. His arrangement is founded wholly upon the operative effects of medicines, or upon the different and distinct powers that there are in materia medica; the number of classes corresponding to the number of these powers. It is doubtful whether an arrangement or classification upon any other basis than this, would be in any respect better than a simple alphabetical arrangement; and though the number of these different and distinct powers is uncertain or undetermined at present, yet it is one of the merits of this system that it not only assists us in obtaining clear and comprehensive views of therapeutics, tends to unfold and elucidate its principles, furnishes a guide to our future investigations, but suggests the way, and provides for its own improvement. If the number of these powers, each of which is made the foundation of a class, shall be ascertained to be either too great or too small, a corresponding change in the number of classes will take place naturally and unavoidably; and it is another excellency of this system, that in either case, every article and every process that may be usefully employed in the treatment of diseases, can find a place and must necessarily be included in some one of them. Even bloodletting, which can never be looked upon as a mere cooling process, and can, therefore,

find no place among the refrigerants of other writers, and on this account, doubtless, is wholly omitted in their systems, will stand at the head, and as the most prominent type of the antiphlogistics, and will be largely treated of as such ; while shampooing and the various kinds of exercise, active and passive, will have their appropriate places in the system.

That the most obvious and certain, and by far the most important effects of either bloodletting, purging by the saline cathartics, the internal use of tartrate of antimonia and potassa or nitrate of potassa, are to lessen the force of arterial circulation, and the vital powers of the system will be generally admitted. On the other hand, that by far the most important effects of the internal use of alcohol, wine, etc., are directly the reverse of this, viz. to increase the strength of arterial circulation and the vital powers generally, especially where such effects are needed, will be as universally admitted. There are, perhaps, no two sets or classes of articles more potent for good when rightly employed, or for evil when wrongly employed, than those which possess either of these opposite or opposing powers in a prominent degree ; and hence there are none in regard to which it is more important that the principles of therapeutics should be clearly defined and elucidated. We have the highest authority for saying that the skill of a physician, in the treatment of febrile diseases especially, depends mainly upon his judgment in selecting one or the other of these classes, or upon his knowing when to support and sustain the powers of life on the one hand, or to reduce them on the other. If it is best to have any distinctions at all in therapeutics, it would seem that the distinction between these two antagonistic powers should be maintained ; and if there is any other way of arriving at the principles of therapeutics, than by recognizing and keeping such distinctions always in view, it is desirable that it should be pointed out. And yet, there are those who advocate the employment of bloodletting, and the use of wine or alcohol at the same time, or in immediate succession, though upon what principles we are not informed. True experience there is no gainsaying, though it should unsettle all our principles ; but experience, when directly contrary to rational and apparently plain principles, should be thoroughly tested before it is admitted to be true, and when its truth is admitted, the principles will need to be revised and corrected, or new ones should be found to meet the case ; a labor that will devolve, of course, upon him who claims to have gained the experience. Empiricism should always be looked upon as an intruder, and never be welcomed, especially when there are so many at hand, whose vocation it is to entertain it. With our present understanding of principles, he who says that he has seen the best effects from bleeding and the use of alcohol at the same time, should speak it rather lowly. It should not be whispered even in the presence of an empiric.

It should be stated also, that there are teachers of medicine, those too belonging to the scientific class, who have adopted the notion that every power in materia medica is a stimulant power ; or who teach that bloodletting even is not to be resorted to except for its stimulating

effects; and it is quite remarkable that those who thus do away with all distinctions of this sort, who attribute the same effects to bloodletting as to the internal use of alcohol, or what amounts to the same thing, who apply the same name to both, are the most zealous in inculcating upon their pupils the importance of being governed by general principles, in their treatment of diseases. This is not the only instance that might be mentioned, perhaps, of those who are eloquent in their praises of a certain kind of knowledge, but who, nevertheless, seem to have the most inadequate conceptions of its use and importance, and even the manner in which it is to be obtained. If we mistake not, a similar inconsistency may be charged upon some modern pathologists, as we may have occasion to show, when speaking of Dr. Tully's pathology. It is much shorter and easier, to insist upon the importance of general principles, than to state them, or to show how or where to look for them. Nothing can be more prejudicial to the principles of therapeutics than to confound all distinctions in the powers and effects of therapeutic agents, and for one who insists upon the importance of principles to do this, it is like tearing away the foundations of an imaginary superstructure; while the more numerous such distinctions are, and the more clearly they are perceived and maintained, the more numerous, important, and practically useful, will be the principles that arise from them, and that arise from nowhere else.

Affirmation is as good as twaddle, and one may as well speak what he honestly thinks himself, as to speak what others may be dishonestly pleased to have him think. If he is wrong, there are enough who will stand ready to set him right, and who will not be very likely to be better employed than in doing so. We say, therefore, and without any expectations of being set right, that nowhere are the principles to govern us in the use of these two classes of articles, (which, as just stated, are as important as any others, and in regard to which there is so much difference of opinion, so much uncertainty, inconsistency, and confusion existing at present,) so clearly stated, defined and elucidated, and in such a manner, as to commend themselves to every intelligent physician, as in Dr. Tully's proëms to the antiphlogistics and the antisbestics. This, however, is not saying that his manner of stating them may not be greatly improved upon.

So broad is the distinction between these two classes, and so important are the therapeutic principles growing out of it, that it becomes indispensable that the classes should be called by the most significant and the most appropriate names. To call those articles whose most important effects are to lessen the vital energies and strength of action in the sanguiferous system refrigerants or mere coolers, would be obviously a misnomer, as it could not fail to mislead; and to call those which produce the opposite effects stimulants, a name that has been so extensively and so vaguely applied as to require a definition by every physician who uses it, and every time he uses it, in order to express the idea he may wish to convey, would, if it expressed any idea at all, be almost as sure to mislead. For the appropriateness and the significance of the terms antiphlogistics, as the name of one of these classes, and

antisbestics, as the name of the other, see Tully's Materia Medica, where the etymology and exact signification of each are given.

It will be seen, therefore, that, in order to define and elucidate the principles of therapeutics, we must have regard to its nomenclature as well as to its classification, or to those distinctions which classification is designed to impress upon us and to perpetuate in our memories, as well as to make it easy for us all to understand them alike, and to communicate our ideas of them by a single word. These things—its principles, its classification, and its nomenclature—each originating from the distinctions the importance of which we are insisting upon, have a relation to each other so close and intimate that the improvement of the one must necessarily keep pace with the improvement of the others.

It is useless to carry the illustration further to show that the distinctions between all the powers or classes, or between the operative effects of medicines, must be the foundation of principles, and, with a single exception to be alluded to hereafter, the only foundation of principles in therapeutics. It is from pathological distinctions that indications arise for the fulfillment of which the principles of therapeutics are to be applied. There are but few instances in which two powers or classes have the same antagonistic relation to each other as in the case we have selected. As a general rule, instead of operating against each other, they may be exerted simultaneously, and without in any way conflicting with, hindering or interfering with each other. Though the distinction between a narcotic and an antisbestic power, for instance, is obvious enough, and though both may be indicated, and both produce their legitimate effects at the same time, yet it is the distinction that exists between them that must always be kept in view, as it is from this that we are to decide whether they are to be employed separately or in conjunction, as well as whether there are any true indications for either. The same may be said in regard to any two or more powers or classes that are not incompatible with each other, and that may therefore be employed separately or in conjunction, as there may be indications for one or more of them. When the distinction is like that between an antiphlogistic and an antisbestic, or when two powers counteract each other in any manner or degree, it must of course preclude their employment in conjunction, and it is scarcely more in deciding upon the true indications to be fulfilled, than in avoiding these conflicting powers in his endeavors to fulfill them, that the skill and judgment of the physician are evinced.

Nor are the distinctions that exist between the twenty or more classes the only ones that are important to be recognized. There are distinctions among the articles themselves belonging to each class, as respects the strength and quality of their operations; and, besides, there are articles that possess two or more distinct powers within themselves, and if possessed in equal degree, would require that they should be included and treated of under two or more classes. Opium, for instance, is well known to be stimulant; or, to use a word that has a signification, antisbestic as well as narcotic. It is diaphoretic also; and, accord-

ing to Dr. Tully, it has other powers besides, none of which can of course counteract either of the others, but may all be indicated at the same time; and if they are not all united in the same article, might be required to be united in the same prescription. That these powers of opium are different and distinct, is shown by the fact that each of them is exerted independently by other articles, or by articles that have no other power. Again, alcohol is antisbestic as its most important power, and euphrenic as its most prominent one. It is also both diaphoretic and diuretic, and lastly, narcotic. For this last it is seldom employed medicinally, though frequently resorted to as a mere luxury by those who can afford it, and by others—those who have a predilection at times for the open air, the wayside, or street-gutter as a place for repose. The distinctions between the antisbestic power of alcohol, or that by which the strength of arterial action and the vital energies are increased, its euphrenic power, or that by which euphrasy or positive exhilaration is produced, and its narcotic power, or that which disposes one to sleep or repose, though they have all been confounded heretofore, and all been comprehended in the word stimulant, are nevertheless real and palpable; as much so as are the narcotic, antisbestic, and diaphoretic powers of opium, which no one doubts. Its diaphoretic and diuretic powers are obvious and equally distinct from each other, and from those just mentioned. Now whether these distinctions, made and insisted on by Dr. Tully, are ever to be recognized by the profession or not, it is clear that alcohol can never be intelligently or judiciously prescribed, without regard to them. In other words, it is from our knowledge that alcohol possesses each of these distinct powers, and produces each of these distinct effects, that the principles of its therapeutic application are to be deduced.

These compound articles, or those that possess a plurality of different and distinct powers, are quite numerous, and we will now turn to Dr. Tully's classification to ascertain what provision it makes for them, or how they are to be classified and arranged with reference to defining and elucidating the principles of therapeutics. If there are advantages to be gained by arranging all the articles and processes in materia medica in distinct classes, according to their different powers, it is obvious that all those comprehended in each class may be so arranged among themselves, according to their peculiar operations, as to be advantageous also. Those that possess but a single power may be arranged in distinct groups, having reference to the strength or quality of the power; while all those possessing two or more powers may be arranged in other distinct groups, having reference to the number and sameness of their powers; the most prominent power, of course, to be indicated by the name of the class, and each of the less prominent or subordinate ones to be indicated by the name of the group; and in both cases a plain reference will be had to those distinctions upon which both classification and principles are based.

First ascertaining the number of powers known in materia medica, and making each the foundation of a class, the name of which is to be the same as that of the power, and then grouping the articles included

in each class according to the number of powers they possess in addition to the most prominent one and which brings them into the class, the name of each group to suggest the name or names of each subordinate power, is not only the most natural and philosophical arrangement, but the most advantageous for all the purposes of classification. Such may be truly said to be "a common sense classification, without arbitrariness, true to nature, and faithful to science." If not the foundation, it will be the repository of the principles of therapeutics.

Dr. Tully notices the different grades in the operation of each class or power, and distinguishes between the primary and secondary, or the immediate and remote effects of medicines. Here also are distinctions to be observed by him who is in search for those principles, the utility and importance of which can never be doubted. No other writer has pointed out these with so much distinctness and fidelity, and in such a manner that when once perceived they can never be disregarded. For the most part, these are alluded to in his definitions of the several powers or classes, the only place in which they can be alluded to in a system of classification. Doubtless, when treating of the individual articles, these will be more fully discussed.

In the mode of managing or prescribing medicines, there are important distinctions to be kept in view. Whether one or the other of the powers of alcohol, for instance, is to be exerted most and predominate over the others in a given case, depends upon the size of the doses, the periods of their repetition, the accompanying diet, regimen, etc. When used medicinally, its narcotic power may be of more consequence, in preventing or allaying irritation and restlessness, than is commonly supposed. When taken in large doses, in health, and upon an empty stomach, its euphrenic effects will be prominent, intense and almost immediate, but will soon be superseded or transcended by its narcotic power. But when its antisbestic power is most loudly called for, and when large and frequently repeated doses are demanded, as in malignant and other extreme cases, both its narcotic and euphrenic powers will be transcended by its antisbestic power. This has been often noticed by patients themselves and nurses, as well as by observing physicians. In such cases, it is said that the patient takes every hour enough to intoxicate him if he was well, but without any euphrenic or intoxicating effects that are apparent.

But the laws of the operation of opium, in this respect, are still more remarkable, and still more important to be understood. When given in small and often repeated doses, though it has as much effect perhaps to allay pain, irritation and restlessness, as when given in larger ones, and at longer intervals, yet the former mode of administering it actually prevents sleep. It is an important fact in regard to the operation of opium, that if a quantity sufficient in all probability to prove fatal in twenty-four hours or less, when taken at once, if divided into twenty-four doses, and one of which is given every hour, no unpleasant effects will result, except this inability to sleep; and even this can hardly be said to be an unpleasant effect in many cases. But there are circumstances that modify its action in this respect: when wakefulness, rest-

lessness and irritation have been long continued, sleep will take place when it would not otherwise. There is a difference in the susceptibility of different persons to its narcotic influence, especially when its use is first entered upon; and its effects, like those of alcohol, will be modified by its being accompanied with suitable nourishment or otherwise. This subject of transcendency, treated of by Dr. Tully in his introduction, though scarcely alluded to by other writers, is one of great interest and importance. There is another fact in regard to the management of opium, important to be known. When a single large dose is required, as is sometimes the case for the relief of severe pain, obstinate diarrhœa or uterine contractions, if the dose is only just sufficient to meet the case and obviate the symptoms, though the quantity may be six or eight times as much as would be considered a medium dose, its soporific effects will be slight. It is not the less important that this law of the operation of opium should be known from the fact, that this is the only narcotic that can be at all relied on for the relief of either of these symptoms. It has been said that there are cases of diarrhœa that opium will not stop. The same may be said, perhaps, in regard to pain and uterine contractions; but this does not alter the correctness of the general statement. The manner in which disease itself modifies the effects of opium and other agents, is also an important subject, and should be understood by him who is in search for the principles of therapeutics.

In the mode of managing medicines, therefore, there are distinctions to be observed from which principles arise. But to these Dr. Tully's classification has no reference. Distinctions in the operative effects of medicines, and in the mode of managing them, have no connection with each other. The former are susceptible of classification; the latter are not. To all the former, that are most important to be kept in view, Dr. Tully's classification will be found to have a distinct reference.

The superiority of this plan will be seen when contrasted with others. There are other distinctions upon which classification may be based. They may be first divided into three great classes, according as they are derived from the animal, vegetable or mineral kingdom; and then the sub-divisions of those derived from the vegetable kingdom may have reference to the parts of the vegetables used, the roots, bark, stems, leaves, flowers, seeds, juice, etc. or it may have reference to their natural history distinctions, the class, genus or species. Or a classification may be founded upon the different parts of the system acted on by medicines, as the alimentary canal, the sanguiferous system, the nervous system, the muscular system, the glandular system, etc. But none of these modes will answer any of the most important purposes for which classification is needed. They would have no relation to the principles of therapeutics, nor would they aid us at all in taking a general and a comprehensive view of the subject.

Distinctions in pathology or symptomatology, may be made the basis of classification. But a symptom or pathological condition, may be obviated by widely different articles, or may require two or more articles that have no affinity with each other for its removal. Inflammation

may require antiphlogistics at its outset, adenagics in its course, and tonics and narcotics at its close, according to the views of some at least; so that classification upon such a basis would have less relation to the principles of therapeutics than might be supposed at first—a relation that would be only partial and constantly changing, even if the classes were coextensive with the symptoms or pathological conditions.

An arrangement like that of Dr. Tully's, based upon the operative effects of medicines themselves, independent of symptoms or pathological conditions, and this plan rigidly adhered to, is the only one that can be called scientific as applied to therapeutics, as it is the only one upon which the science or the art of therapeutics can be based, or that will have the true relation to its principles, which is the grand object of classification. And yet an arrangement upon some other basis, or even an alphabetical one, may have its uses, and may be retained in connection with, though not as auxiliary to a scientific one. Dr. Tully even adopts some of them in connection with his, and secures all the benefits they are calculated to confer.

Nor will an arrangement partly upon his plan, and partly upon some other, be materially better than those we have noticed, inasmuch as a deviation from his plan, even in a single instance, will introduce confusion into the whole system. Most of the plans heretofore proposed have been of this mixed character. Though most of the classes have been founded, like Dr. Tully's, upon the operative effects of medicines, yet as others have been founded upon symptoms or pathological conditions, or upon the parts of the system acted upon, these must of course include articles that clearly belong to the other classes, and that have no similarity in their operative effects, which makes confusion in the whole system.

It is scarcely less important that the nomenclature for the classes should be correct and appropriate, than that the plan of classification should be correct and rigidly adhered to. A few inappropriate names for the classes would derange the whole system. We have already seen the importance of appropriate names for the antiphlogistics and antisbestics, but it is no less important in all other cases. Names that are calculated or have any tendency to mislead, must confuse our ideas of the utility of the system and compromit its integrity.

To obtain any clear and comprehensive, or any just and practical views of materia medica, with its immense accumulation of facts, which are themselves but dimly perceived, while lying in such utter confusion without classification, a confusion that is scarcely mitigated by the partial, imperfect, and arbitrary arrangements heretofore proposed, a true, natural and philosophical classification is absolutely indispensable; and it is one of the most interesting phenomena in physic, to see how the facts, multitudinous as they are, and heterogeneous as they seem, will arrange themselves in order, each taking its proper place, from which its comparative and true value and importance will be perceived, under the magic influence of such a classification. The entire subject, extensive as it is, can be taken in at a glance, its strong and its weak parts will be perceived, and we shall know how and where to apply our

labors to strengthen and advance it. Incomprehensible and appalling to the student before, it is easily comprehended, and becomes attractive to him now; and independent of its practical utility, it will be pursued like other branches of natural history, as a means of mental elevation and improvement. The study of botany becomes delightful, in proportion as we become acquainted with its scientific arrangement, its wonderful adaptation to the ends and objects of classification, and to object to such a classification in materia medica, on the ground of innovations, would be conservatism in its most odious acceptation. To the student it will be something to effect such a change in the study of materia medica, but to the skeptical physician it will be more to establish its principles, and show its practical utility in a new and important light. If medicine is to be elevated above the various forms of quackery, and overshadow them, it must first be reduced to a science, and he who makes an attempt to do this, which is in any degree successful, is a benefactor. It is the scientific character of this work that should commend it to every scientific physician, and this alone is sufficient to commend it to the careful perusal of every medical student. No author is competent to master the whole subject or to treat of it satisfactorily in detail, till he has first systematized and arranged it, and upon true principles. The report upon American medical literature, submitted to the recent meeting of the A. M. A., referred to Dr. Tully's definitions as being far superior to any others. It seemed not to have occurred to the writer of that report, that the mind that could produce such clear, precise, and accurate definitions, must necessarily be the best adapted, to examine and discuss every topic belonging to his subject.

If the system here presented is not perfect in itself, an examination of it cannot fail of producing more just views of the utility and importance of classification, and the principles on which it should be founded. If the author has not attained the desired object, the importance of what he has attained, as a guide to those who may come after him, can scarcely be overestimated. To show that our own views of it are not peculiar, and in closing what we have to say upon it, we insert the following extract from a private letter, received from an aged physician, who has died since the work was published. Those who can appreciate science and philosophy in application to physic, can judge, from the extract itself, whether its suggestions are worthy of consideration.

"It is, of course, to be expected, we might almost say it is to be hoped, that Dr. Tully's views will meet, to a greater or less extent, with opposition. But it would be superfluous to enlarge upon a topic so obvious as that the interest, the value, and to a great extent, the usefulness of a new work on this subject, is not to be estimated by the proportion of its readers, who at once coincide with its most peculiar views. On the contrary, it is originality of thought, patient accuracy of investigation, and the extent and amount of the facts from which its inductions are drawn, which chiefly make such a work valuable. Above all, the immense accumulation of materials in the materia medica, increased as they are by valuable additions every year, must cause

every one to feel the need of the simplifying effect of general views and comprehensive classifications.

"Some practitioners, and more especially, perhaps, many who are advanced in life, will object that 'we have for a long time had too large a number of remedial articles, rather than too few, that we should aim not to increase but to diminish their number; that, to borrow an illustration from the mechanical arts, practitioners would do well to employ with skill and accuracy a few good tools, rather than distract their minds with a large number.' But even granting the soundness of this advice, must we not look a step farther? In making our selection can we have too large a stock to select from, provided each article is carefully described under general views? Is it not obvious that the vexation of discordant and conflicting testimony and opinions, in regard to the operations and usefulness of articles, becomes a more serious evil in the case of a small number than of a large one? The greater the number investigated by an author, the more numerous are his advantages for relieving such embarrassments. The case is similar in that of arranging species in botany and other branches of natural history; every new species supplies a link in the chain of being, which remedies a deficiency, and leads to more satisfactory views of the relation existing among those previously known. As the branches of natural history become more extensive, a knowledge of them becomes also simpler, because the wider the basis for induction, the more simple as well as more comprehensive are the general views. Although the accumulation of facts in materia medica is already so burdensome, yet if a man appears, who has not shrunk from the necessary industry in accumulating and investigating, the more numerous the facts from which he draws his inferences, the more broad, comprehensive, simple, and satisfactory, and finally, the more practically useful will be the general laws which he attempts to establish. They will have a *primâ facie* probability as well as an agreeableness. This is precisely what Dr. Tully has essayed, and his is the first attempt so far as materia medica is concerned, to do this with a careful avoidance of merely hypothetical views, and with a rigid induction from facts proved by experience and observation."

The diligent student, in search for principles, should not be too much elated at the prospect we have opened to him. It would be well for the indolent if "the principles, on which the treatment of diseases is based," were "few and simple;" but he who is both an intelligent therapeutist and an intelligent pathologist, cannot view them so. They may be simple when fully comprehended, but they will be too numerous to be acquired without industry. The remark, that "the whole art of physic can be written upon half a sheet of paper," is worthy of the man whose library has been compared to a spado's harem.

Possibly it may turn out that this word principles, like the word stimulant, has been somewhat abused of late. It is exceedingly convenient and comprehensive, and is, therefore, liable to frequent use by those who do not stop to consider its exact signification. It is never worth while to cheat ourselves or others by the use of words which have the semblance of reasoning, but signify nothing. We have given our

own understanding of it in its application to therapeutics. If it is not equivalent or nearly so to guides to the right use of medicines, or rules for the right use of medicines, its use should be abandoned till its true definition is given.

The importance of principles rightly understood no one doubts. If it is a Yankee's chief end to get something to sell, it should be a physician's chief end to get principles; but for a physician to be always talking in favor of principles, without himself knowing exactly how or where to get them, is about as wise as it would be for a Yankee to be daily counting his eggs, of the ages of which he is not exactly certain, to find the income he may reasonably expect from the sale of his chickens.

ART. IX.—*Clinical Reports from the Hospitals of New York; prepared for the* NEW YORK JOURNAL OF MEDICINE.

NEW YORK HOSPITAL.

Report of Surgical Practice.—1st Surgical Division. JOHN WATSON, M.D., Attending Surgeon. Reported by ROBERT RAY, M.D., late House-Surgeon.

Case 1. *Wound of the Liver.*—P. V., a strong and remarkably muscular man, aged 35, was admitted, having been fired at with a revolver, a few hours before, in a fight. On examination, two small round pistol-ball wounds were found, near each other, just above the crest of right ilium, which were supposed to be the points of entrance and of exit of the same ball; also a third similar wound between the cartilages of the 7th and 8th ribs, two inches to the left of median line. None of the tracks could be traced into the abdominal cavity, nor could the direction in which the balls were fired be ascertained. There were scarcely any evidences of shock to the system, and all went well until the second day, when there appeared a slight yellow tinge of the conjunctivæ and the skin. This rapidly increased, so that in a few days patient was intensely jaundiced, at the same time the abdomen became slightly tympanitic and tender on pressure, especially over region of the liver. At the end of a week, patient, for the first time, had a chill with moderate sweat; his pulse now ran up to 120 per minute, the chills recurred irregularly, his intellect became sluggish, and the discoloration of the tissues more intense and universal. Bowels constipated, but the stools normal in color. He thus gradually sank till the nineteenth day, when he died. The autopsy showed a sloughy track, an inch or more in diameter, passing directly through the liver from the point of entrance of the ball (just to the left of ensiform cartilage) to the lower surface of the right lobe, where the ball had doubtless emerged into the areolar tissue, behind the ascending colon, giving rise to an extensive abscess which had formed there, extending down into the pelvis. The gall bladder and the ducts, and also the remainder of the liver were healthy. The wounds in the side were separate from each other, and were both superficial.

Case 2. *Ranula.*—A. B., a middle-aged man, of light complexion, presented himself with a fluctuating tumor on each side of the frænum linguæ, about the size of a pigeon's egg, pushing the tongue up and to the right side. He had been treated once by puncture, but two years ago the tumors returned. A portion of the thin sack of each of the tumors was now removed by curved scissors, whereupon from each of them about ℥ss. of a very viscid yellow fluid, resembling the white of an egg, was evacuated.

Case 3. *Amputation at the shoulder joint.*—P. W., a middle-aged man, had his right arm completely torn off by machinery, a hand's breadth below the acromion. In about eight hours, reaction being established, patient was etherized, and the limb removed through the shoulder joint, by the circular method. The operation was borne well, but subsequently a great deal of constitutional disturbance showed itself, which, however, was due to nothing more than the formation of two abscesses (one on the thorax and the other over the scapula) which found ready means of discharging through the wound, only about two-thirds of which had united by adhesion. Suppuration gradually diminished, and without other untoward symptom patient was discharged on the forty-second day.

Case 4. *Atresia vaginæ—Vicarious menstruation.*—C. A., a well-developed young woman, 26 years old, was admitted; she says that from the age of 16 she has always had a great deal of pain at each of her menstrual periods, which, moreover, come on very irregularly—ordinarily every eight weeks, or so. At these times she has severe pain in back and hips, and in a hard tumor which has gradually grown, and can now be felt in right ovarian region. It is the size and shape of a large orange; on two occasions the skin over it has broken, and a small quantity of yellow fluid has been discharged. Her pains cease, and this tumor diminishes in size on the occurrence of a bloody discharge, lasting four or five days, which comes away with her urine. On examination, no trace whatever of the vagina is discovered, the walls of the bladder and rectum being in close contact. The space externally between the anus and urethra presents no depression. The urethra is so patulous as readily to admit the forefinger, which, on being passed into the bladder, detects a body posteriorly, about the size of the uterus, and in about the normal position of that organ. There is, however, no passage whatever leading to it. While in the hospital she had one of her menstrual turns, lasting four days, during which time her urine (over which she has complete control) was of a deep red color, doubtless from the admixture of blood.

Case 5. *Stricture of the rectum.*—C. A., aged 30, in good health, and the mother of two children, the youngest 6 years old, states that soon after the birth of the latter one, she noticed that her bowels gradually became sluggish; this increased, so that before long they did not move spontaneously more than once in a week, since which time she has habitually used injections. She suffers no pain except during the passage of fæces; has never received any injury in these parts. On examination, a membranous, annular constriction, not quite permitting the pas-

sage of the finger, is felt in the rectum, about two inches above the verge of the anus. There is no surrounding induration. This constriction was accordingly divided with a bistoury by a single incision, posteriorly. After a week the use of bougies was commenced, and in a month she went home free from all her trouble, the rectum readily admitting a full-sized instrument.

Case 6. *Webbed fingers.*—J. O., a man, aged 27, was admitted with the ring and middle fingers of each hand closely united by a thin web throughout the whole length; bones, etc., normal; deformity is congenital, and has never been interfered with. Patient was etherized, and the web entirely divided by a bistoury. The commissure at the root of the fingers was then closed by two small flaps (one palmar and one dorsal) consisting of the integument, which lies between the heads of the metacarpal bones, the transverse line of the palmar flap being in the line of the groove at the base of the fingers, that of the dorsal flap extending somewhat farther towards the points of the fingers, so as to bring the line of union toward the palm. The two flaps were then drawn into coaptation between the fingers, and retained there by sutures. The surface left on the side of the fingers by the retraction of the divided skin, was left to heal by granulation. The operation (which was performed at the same time on both hands) proved to be entirely successful. The flaps united without any intervening cicatrix, and thus completely isolating the fingers from each other, while the sides of the fingers granulated kindly, and were soon covered with new integument.

Case 7. *Necrosis of the tibia.*—J. G., a boy having a scrofulus aspect, aged 17, bruised his foot and leg sorely, without, however, breaking any bone or cutting the skin. He walked about for a day or two, but was then obliged to go to bed, owing to the supervention of severe pain and swelling of the foot and leg, with febrile reaction. The swelling rapidly increased, so that in a few days after his admission, numerous free incisions were made, giving exit to a large amount of pus, and allowing the tibia to be felt bare, though not rough, for almost its whole extent. During the next two months, suppuration was very copious, and hectic symptoms set in, rendering it necessary, at the end of that time, to remove the limb just below the knee. After this had been done, patient soon got well. On examining the limb, the ankle joint was found open, and the whole tibia, except its upper epiphysis, dead. The upper and lower extremities were covered with involucrum, and a thin layer of new bony tissue adhered to the anterior margin of tibia throughout its whole length. The periosteum separated from the internal aspect of the tibia was thickened by fibro-cartilage and lymph, and was continuous above and below with the new bone. Specimen preserved in the museum.

Case 8. *Compound fracture of thigh.*—J. B., a robust man, aged 30, was shot (as is supposed, by a musket ball), on 4th of July last. The wound was small, and situated on the upper third of the thigh on its outer side, and passing thence inwards toward the bone, which was fractured and somewhat comminuted at junction of upper and middle

third. No ball found. The limb was put up with a long splint, and moderate extension made. Severe constitutional disturbance followed, and several large abscesses formed in the thigh, and were opened, and the discharge became profuse and exhausting. At the end of the second month an incision was made down upon the fracture by the surgeon then in attendance, and a small piece of necrosed bone, and a fragment of the bullet, were removed. Since then, the discharge has slowly been diminishing, and now, at times, ceases entirely. The whole limb, however, from the groin down to the toes, is swollen to twice its natural size, and is hard and brawny to the touch, so that the condition of the bone cannot be felt. Within the last two months patient's general condition has become very good, and at the same time union in the fracture has progressed, so that before long it will be quite firm.

Case 9. *Stab in the thorax—Empyema.*—D. L., aged 27, a man in good health, was stabbed with a shoemaker's knife in the left side, between 8th and 9th ribs, on a line with the axilla. On admission, he was but little prostrated, and the hemorrhage was moderate; it was soon checked by a compress. There were no signs of wound of the lung. Auscultation next morning revealed nothing abnormal, except a systolic click heard at the apex of the heart; this sound only lasted 24 hours. In four or five days more inflammation of the left pleura came on, in a subacute form, and resulted, in the course of a week, in the filling of the pleura with fluid, the left side being dull up to the second rib, and the apex of the heart being felt to beat under the right nipple. So urgent did the dyspnœa and his general symptoms now become, that a consultation was called on the propriety of evacuating the fluid by puncture. During the night, however, an opening took place spontaneously, and some two or three pints of fluid escaped in a stream from the wound. The discharge, which was at first serous, continued, and soon became purulent, while the dyspnœa was at once relieved, and the heart came back towards its normal position. After a long struggle (four months), with the exhaustive discharge from his chest, patient is now fully convalescent, suppuration having nearly ceased. His left side is of course very much contracted, but the heart is in its proper place, and the respiration is becoming more and more audible on the affected side.

BELLEVUE HOSPITAL.

Four Cases of Ligature of the Femoral Artery for Popliteal Aneurism.

Reported by J. J. Campbell, M.D., House-Surgeon.

Case 1.—C. Q., aged 40; robust constitution; slightly intemperate; admitted Oct. 19th for aneurism of the left popliteal artery. No hereditary disease traceable. About the first of August, he jumped from a height and sprained his ankle slightly. He continued his work after the accident, but had to give it up, in a few hours, on account of severe pain in his ankle. About the first of October following, he noticed a small tumor in the popliteal region of the left lower extremity. This tumor continued to enlarge, and pain him, until the 16th of the same month,

when he lost the power of using the limb. About this time, he began to suffer from a tingling sensation in the anterior aspect of the leg, and in the sole of the foot.

When admitted, he had a large diffused swelling in the left popliteal space, which gave the usual signs of aneurism. When the circulation through the femoral artery was interrupted, the tumor collapsed; but when the compression was removed, it filled with a heaving sensation with each pulsation of the artery.

Oct. 21st.—A consultation was held, and ligature of the femoral artery advised. Dr. C. D. Smith tied the vessel in the lower part of of Scarpa's space, while the patient was under the influence of ether. During the evening, he was somewhat restless, and a grain of opium was given every hour until sleep was induced.

Oct. 22d.—The patient slept well last night. The temperature of the limb is good.

Oct. 25th.—The temperature of this limb is as good as that of the other. The tingling sensation complained of in the leg and foot, previous to the operation, still continues. The wound does not seem disposed to unite by first intention.

Oct. 30th.—The patient's health and spirits are good. The wound is healing by granulation.

Nov. 10th.—The ligature came away to-day with the dressings. About one-third of the wound is united, and the remainder is granulating nicely.

The patient was discharged cured in December.

Case 2.—A. S., aged 45; good constitution; intemperate; boatman by occupation; has always been healthy, with the exception of occasional attacks of rheumatism in his knees and ankles, for the past three years; no hereditary disease traceable. He has ossification of the radial arteries. On the first of May, 1857, he noticed for the first time a soft painless tumor about the size of a hen's egg in the left popliteal space. About a week after he first observed the aneurism, he attempted to go down stairs for the first time for several weeks, as he had just recovered from an attack of subacute rheumatism that had confined him to his bed, but found that he could not flex the leg well, on account of pain in the tumor, and stiffness of the knee.

June 9th.—The following measurements were made; viz., from the upper to the lower border of the tumor four and a half inches, and five and a half inches across; the circumference of the leg just below the lower margin of the patella was fourteen and a half inches, and a corresponding measurement of the opposite limb gave twelve and a half inches.

June 13th.—Compression of the femoral artery was commenced, but had to be given up on account of the great suffering it caused. Various attempts were made to carry out this plan of treatment without success, as the patient could not bear it, and it was finally abandoned June 24th. One fact noticed during this treatment was, that whenever the compression was let up, the patient complained of what he described to be streams of fire running in the course of the arteries for a few moments afterwards.

Sept. 26th.—Dr. Stephen Smith tied the femoral artery in the middle of Scarpa's space, while the patient was under the influence of ether. Before the ligature was tightened, it was noticed that the artery was ossified in small patches. As soon as the circulation through the femoral artery was arrested, all pulsation in the aneurism ceased immediately, and it shrunk to the size of a hen's egg. The pulse at the wrist became a little more frequent and fuller. The temperature of the foot and leg soon fell a few degrees below their normal standard. The limb was carefully wrapped up in blankets to keep it warm.

Case progressed favorably to the following date.

Oct. 22d.—The ligature came away this morning, 26th day. No pulsation in the tumor. The greater part of the wound has healed. Feels good in every respect.

March 3d.—The remains of the aneurism is quite soft and about the size of a pigeon's egg. He suffers a good deal from chronic rheumatic inflammation in the knee. It pains him severely to extend his leg upon his thigh. He is not able to get about the ward except on crutches.

Case 3.—T. M., aged 32; good constitution, and temperate in his habits; was admitted into the hospital, January 5th, 1858, for aneurism of the right popliteal artery. About five weeks previous to his admission, he began to suffer while walking from a pricking pain in the right popliteal space, and found, on examining the part, a soft tumor about the size of a hen's egg. On admission, a large diffused tumor was found, presenting the following symptoms; viz., softness, pulsation, thrill, bruit, and could be made much smaller by compressing the femoral artery. It caused him a great deal of pain, and as it was increasing rapidly in size, the pain was becoming almost intolerable, and could only be relieved by giving him on the average four grains of the sulphate of morphine in the twenty-four hours, and keeping the knee enveloped in cloths kept wet with a strong infusion of opium. The pain was about the tumor and down the leg, in the course of the peroneal nerve.

Jan. 16th.—Dr. James R. Wood tied the femoral artery in about the middle of Scarpa's space. The patient, although not under the influence of any anæsthetic, bore the operation remarkably well. The moment the ligature was tied, all pulsation in the tumor ceased, and it diminished fully one half in size, and the pulse at the wrist became a little more frequent and fuller.

Jan. 17th.—Pulse 88, full and strong, and his general condition is good. The wound looks well. Complains of some pain in the knee and outer side of the leg. No pulsation in the tumor, which is smaller and harder than it was yesterday. The leg is not as œdematous as it was previous to the operation, but the foot and ankle still remain swollen.

The temperature of the right foot 83° F., popliteal space 86°, and groin 89°.
" " " left " 82° " 92°, " 94°.

Jan. 18th.—Pulse 92 and full, and his general condition is good. Suffers but very little from pain. He says the outer side of his knee

feels as if it were asleep. The wound looks well. No pulsation in the tumor. The foot and ankle still remain swollen.

The temperature of the right foot 84° F., popliteal space 88, and groin 96°.
" " " left " 86°, " 94, " 97°.

Jan. 19th.—Continues to do well. The foot and leg are perspiring freely. The foot is still œdematous.

The temperature of the right foot 92° F., popliteal space 94°, and groin 94°.
" " " left " 91° " 96°, " 96°.

Jan. 21st.—Pulse 104, soft and moderately full. Suffers from pain in the abdomen caused by not having his bowels moved since the operation. A large injection of tepid soapsuds was ordered. Foot and ankle still œdematous. No pulsation in the tumor.

The temperature of the right foot 93½° F., and popliteal space 94°.
" " " left " 92°, " " 92°.

Jan. 22d.—Pulse 100, and his general condition is good.

The temperature of the right foot 92° F., popliteal space 92°, and groin 96°.
" " " left " 89°, " 94°, " 95°.

Jan. 27th.—Continues doing well. The foot is nearly of its natural size.

The temperature of the right foot 92° F., popliteal space 97°, and groin 94°.
" " " left " 90°, " 97°, " 96°.

Jan. 29th.—Has been doing well since the last note was made. The ligature was removed to-day by Dr. Wood.

The temperature of the right foot 96° F., popliteal space 98°, and groin 95½°.
" " " left " 88°, " 96°, " 95½°.

Feb. 9th.—Commenced to sit up to-day. Wound all united, except at one small point, and there is no discharge from it. Complains of some stiffness in the knee, whenever he attempts to flex the leg. No pulsation in the tumor. There is no œdema of any part of the limb.

Feb. 20th.—He requested to be discharged to-day. The wound is entirely healed. The tumor is much smaller and softer. He cannot extend his leg fully on his thigh.

March 4th.—He called at the hospital, and says he is feeling well. The tumor is rapidly disappearing. There is still some stiffness about the knee, but not so much as to prevent him from walking about.

Case 4.—*Ligature of the Femoral Artery, followed by Gangrene of the Leg and Thigh, terminating fatally.* Reported by JOHN M. FARRINGTON, M.D., House-Surgeon to Bellevue Hospital.

J. R., aged 33, a man of large frame and robust appearance, of apparently good constitution, but intemperate habits, was admitted April 28th, for ulcers of the leg. There were three large ulcers on the anterior surface of the right leg, the edges were elevated and indurated, and their character was presumed to be due to constitutional syphilis, but the patient unqualifiedly denied its possibility. The patient had never been affected with cardiac or cerebral disease. Three months had elapsed since the first ulcer appeared, which was the result of an injury. Three days prior to his admission, in rubbing the leg to relieve the

pain, caused by the ulcers, he accidentally discovered a small tumor in the popliteal region. The day after his admission, he called my attention to it. He said he knew no cause for it; he had never injured himself in that part, and had never been engaged in any vocation, or exercise, that in any way brought this region into special action. Examination revealed a tumor in the popliteal space, from two to three inches in length by one and a half in breadth, not much raised above the surface, firm, with strong equable pulsation, single bruit de souffle and pulsation alike perceptible to touch and sight. Circulation, and sensation of the limb beneath it, unimpaired. Pulse 80 and moderately full and strong. Cardiac and pulmonic sounds normal.

On the 8th of May, the condition of the ulcers was materially improved. They were of diminished size, and healthy in character. At 3 P.M., Dr. Jas. R. Wood applied a ligature to the femoral artery in Scarpa's space. Anesthetics (ether and chloroform) were administered; he came under their influence with great difficulty. His face became suffused and livid, and his respiration was suspended at one time. The tightening of the ligature was delayed until he came out partially from the effects of the ether. After the operation, the limb was enveloped in cotton batting, and bottles of hot water were placed about it. His pulse fell to 64, and was small and feeble. Stimulants were administered, and reaction soon came on. At 6 P.M. the limb was cold; he complained of a severe pain in the ulcers, and in the popliteal region. Ulcers pale and bloodless. Ordered the bottles of hot water renewed, and a hot air bath given, and morphia to be administered every hour.

11 P.M.—Pain has ceased. Limb moderately warm.

On the 9th observed a scar on the glans penis, and a cicatrix in each groin. He now acknowledged that he had primary syphilis 16 years previous, which was followed by constitutional symptoms. Pulse 80 full and moderately strong. Ulcers blackened as though from venous congestion. No pulsation in tumor. Whole limb warm to the touch, but the foot feels cold to the patient. No sensation below the ankle; above it is unimpaired. Temperature of right foot 82°; left 92°; right popliteal space 92°; left ditto; right thigh 90°; left ditto. Complained of pain in his bowels, and that they were constipated. An enema had been given previous to the operation, which brought away some scybalæ. Ordered a cathartic of calomel and jalap, and an enema of warm water and soap. During the day, the foot became sensitive, and he had some pain in the ulcers and popliteal space. At midnight, the pulse became more frequent, reaching 112, and febrile symptoms came on. Ordered 1 gr. of ipecac. every hour.

On the 10th, the pulse was the same as the evening previous. Tongue coated. The enema given yesterday was retained, and the cathartic powder vomited; no movement yet from the bowels. No pain in the limb. No discharge from the wound, which is apparently uniting by adhesion. Foot mottled, whole leg reddish color; surface of ulcers black and dry; tissues around them black and purple, and raised in blebs. Thigh and leg warm, but foot of lower temperature. No sensation in the foot, excepting beneath the toe-nails. The circulation in

the foot is moderate. Position of limb upon a pillow; leg semi-flexed upon thigh, and whole limb lying upon its outer aspect. Towards evening, the pulse was 120, but less strong and full; stomach irritable. Ordered the ipecac. to be discontinued, the enema to be repeated, and gave three pil. cathart. comp. Sensation in foot is fair.

On the 11th pulse 116, moderately full and strong. Tongue still coated; full movement from the bowels, by the use of the enema last evening. Pills not yet operated; stomach still irritable; ordered the sub-nitrate of bismuth. Tenderness down the inner aspect of the thigh for upper half. Appearance of leg and ulcer little changed. Sensation in foot is much impaired. Whole limb perspiring. No pulsation in tumor, and no perceptible change in its size or density. Temperature of right foot 90°, left 92°; right ham 98°, left 96°; right thigh 92°, left ditto. Ulcers dressed with simple cerate. Suture removed from wound; it has united, excepting for a short distance, on either side of the ligature. Discharge moderate in amount. Ordered milk punch. As no movement, excepting from the lower bowels, had occurred, gave another cathartic of colocynth, hyosciamus and croton oil, which operated freely.

On the 12th, pulse 116 and feeble. Has eaten very little since the operation—merely an egg, two oysters, and a little beef-tea. The tenderness along the course of the vein, upon inner aspect of the thigh, increased in degree. Foot cold; circulation much diminished. The ulcers, and surrounding tissues, sloughing. A band of tissue, for 5 or 6 inches in breadth, and extending completely around the leg, is gangrenous. Dressed with oil of turpentine. Temperature sole of right foot 74°, of left 92°; of right ham 94°, left 92°; of right thigh 92°, left ditto. Ordered porter, and the milk punch continued.

13th A.M.—Not much increase in sloughing since last evening. Blebs have formed over each side of the ankle. Line of demarcation not formed. No sensation below the slough. Pulse 104, rather small and feeble. General condition as last night. Appetite better. Slough dressed with pulv. charcoal, creasote, and chloride of soda.

14th A.M.—Wound doing well. Tenderness of thigh much diminished; nothing new in his general condition, excepting that his face is more pallid and countenance more anxious. Whole leg has sloughed from just above malleoli to junctions of upper and middle third, interiorly and posteriorly, to junction of lower and middle third; tibia exposed; tendons of muscles dissected out. Whole foot purple. A line of demarcation appears to be forming.

15th A.M.—Has taken some beef-tea during the night, and has been slightly delirious. Foot black. Tendo Achilles sloughed off; in lower third of leg, nothing remains but the exposed bones, and a few tendons. Line of demarcation fully formed, and gangrenous portion sloughed off, quite up to it. The limb above is of normal temperature and appearance. Wound in thigh as yesterday, excepting the discharge is thin, and of an unhealthy character. Took a pint of beef-tea during the night. Tongue dry with yellowish coat. Pulse 140, small, quick, and compressible. Mental condition depressed, and has been since the day

succeeding the operation. No delirium. Has passed no urine since yesterday evening. Passed the catheter, and drew off nearly two pints of high colored urine. The patient has complained since admission, and for months previously, of pains in the lumbar region over the kidneys; at times the pain is very severe, causing him to keep in a semi-erect posture, as the supine position aggravates the pain. Examination of the urine showed only the presence of urates.

P.M.—Dr. Wood sawed through the tibia and fibula in the middle third, thus getting rid of the stench of the decomposing foot. The complete removal of the gangrenous portion of the leg, was left to await the further action of nature. At midnight found him raving, and struggling in the hands of his attendants; delirium came on suddenly, and continued but a few moments; he was soon soothed into quiet by gentle persuasion.

16th A.M.—No more delirium. Pulse 132 and feeble; subsultus tendinum; bowels free, and tongue moist and less coated. Gangrene extending slightly on outer aspect of leg, but not elsewhere; wound as yesterday. Has taken one grain of opium, every hour, for the past two days, and during the night it was increased to two grains per hour. Stimulants and nourishment are given as freely as the patient can be induced to take them. Has slept some during the night.

P.M.—Mild delirium. Pulse 140, very quick, and moderately full. Subsultus tendinum, and picking at the bed-clothes. The gangrene has extended over a space as large as the hand on the outer side of the leg, not extended perceptibly in front nor upon inner aspect, but tissue red and of increased temperature.

17th A.M.—Delirium most of the time. Bowels move involuntarily; tongue coated, but moist. The symptoms of yesterday continue, but are aggravated in their character. Gave two grains of opium, and two ounces of brandy, every hour, with beef-tea. Gangrene is extending upwards all around the limb, but mostly upon its outer aspect, where it is quite up to the knee-joint. With exception of a small patch in front, the whole of the stump below the articulation is involved to a greater or less extent.

18th A.M.—Pulse 150 and very feeble; face and extremities cold; passed urine once involuntarily. Has taken stimulants regularly through the night. Gangrene much extended; nearly whole stump below the knee is blackened. Popliteal space, both below and above the knee, deep purple, not extended so much upon outer aspect of thigh as on inner; it has gone up at least 4 or 5 inches during the last 3 or 4 hours; the inner side of thigh is reddened for some distance higher.

P.M.—Pulse very frequent and feeble; cannot be counted. The whole thigh is swollen, tense and reddish. Has slept a considerable time. Retains the stimulants and beef-tea. The stump has been dressed twice daily, since the commencement of the gangrene, with charcoal, creasote and chloride of soda, with which it is kept saturated. A large bleb has formed on the inner side of the thigh, over the point that was blackened this morning. Gangrene has extended over and

above the popliteal region; and the whole thigh, as far up as the upper margin of the wound, is swollen and very tense. Pulse still more feeble.

19th.—His condition continued to grow worse, and he gradually sank and died.

Permission to make a post-mortem examination of the body was not obtained until 41 hours after death. The body was then found so much decomposed, that no examination could be made. The tissues were softened and full of gases, and the face was as black as the gangrenous limb.

Report of Five Cases of Trephining. Reported by J. J. CAMPBELL, M.D., House-Surgeon.

Case 1.—A. E., aged 32; robust constitution; was admitted at 1 A.M., Oct. 17th, for fracture of the skull caused an hour previous by a blow with a cart-rung. He presented the following symptoms, viz.: Coma, perfect insensibility, respiration 12 and stertorous, pulse 60, full and soft; both pupils dilated, and the right iris insensible to light, while the left was not. On the left frontal protuberance there was a large, soft, livid swelling that fluctuated, and through which a fracture, with depression of bone, could be made out.

7 A.M.—No signs of returning consciousness; respiration a little more stertorous; pulse 58, full and soft; surface warm, and passes his urine involuntarily. The patient was seen by Dr. C. D. Smith, who ordered a stimulating injection. The patient was seen soon after this, and his pulse found to be 60, smaller and weaker, and his respiration 34 and stertorous.

At 9.30 A.M. it was evident that the compression was increasing, as the symptoms were becoming more marked, and it was deemed advisable to trephine, without further delay. On cutting through the scalp, portions of the frontal, parietal, and temporal bones were found extensively comminuted. When the button of bone was taken out, the depressed pieces were elevated, and many of them removed. A large quantity of extravasated blood was found dissecting the dura-mater extensively from the bone. The fracture was ascertained to run through the frontal bone to the orbit, leaving a piece of bone loose in the roof of the orbit. As this piece was not causing any compression, it was not disturbed. The blood was scooped out. The middle meningeal artery was bleeding freely, but the flow of blood was arrested by the application of cold and pressure. During the operation the breathing became less stertorous, but it did not remain so long. His pulse became very frequent (160) and feeble. Stimulants were introduced into his stomach and rectum. He continued to sink until 1 P.M., when he died. On post mortem examination, a large clot, nearly a half inch in thickness, separated the greater part of dura-mater, covering the left hemisphere of the brain from the skull. A wound one and a half inches in length was found in the dura-mater, opposite the parietal boss. Just under this opening the brain was discovered to be lacerated and covered with extravasated blood. No clots found in the

substance of the brain. The skull was broken into thirteen loose fragments, including those previously removed.

Case 2.—R. M. H., aged 30, was admitted at 10 30 A.M., Oct. 21st, suffering from compression of the brain, caused by falling down a flight of stairs and striking on the left side of the head. It was stated by those who were with her, previous to her admission, that she bled nearly a quart from the left ear. They no doubt not only exaggerated the amount, but were deceived as to its source. There was some hemorrhage from the ear, but there was much more from a scalp wound above and behind the ear.

When brought into the ward she presented the following symptoms, namely: Surface natural, breathing nearly natural, and occasionally a little stertorous; pulse feeble and infrequent, and left pupil dilated and insensible to light. She was restless, and tossed her arms about a great deal. As her pulse soon began to grow very feeble and frequent, a tablespoonful of brandy, with five grains of carbonate of ammonia, was given every fifteen minutes, until five doses had been taken. The pulse had improved in the meantime, and the stimulants stopped, unless internal hemorrhage should be induced. The pulse soon began to flag again until it could no longer be felt at the wrist. The respiration became a little stertorous. All the other symptoms remained about the same as they were when she was admitted. Stimulants were again tried, and with the same effect.

1 P.M.—The left pupil was a little more dilated and insensible to light. A consultation was held, and trephining advised, and the operation performed by Dr. C. D. Smith. The wound in the scalp was enlarged, and another one made, crossing it at right angles. On dissecting up the flaps a fracture of the parietal bone was discovered, but there was no depression of bone. As soon as the button of bone was removed, a mass of coagulated blood sprung up in the opening. After scooping out all the clots that could be reached, it was ascertained that the ruptured vessel (probably the middle meningeal artery) was still bleeding and very difficult to manage. Attempts were made to check it with compression, but without effect; but as the hemorrhage was not very severe, and as the pulse was good, it was allowed to continue. While the extravasated blood was being removed, the left pupil began to contract, and became sensible to the light; but this was not of long duration, for symptoms of compression soon began again to declare themselves. A turpentine enema and sinapisms to the feet were ordered for their revulsive effect.

9, P.M.—Pulse from 78 to 80; moderately full and strong; respiration from 26 to 28, and irregular, and pupils not so widely dilated, but still insensible to light. With the exception of the feet the surface was warm.

11.15, P.M.—Pulse 95, full and strong; respiration easy, and from 28 to 30, and pupils not so widely dilated. Evaporating lotions were kept applied to the head.

Died Oct. 22d, at half-past four, A.M.

Autopsy.—Extensive bloody infiltration under the temporal muscle.

A fissure was found in the squamous portion of the temporal bone, one and a half inches above, and three quarters of an inch anterior to the meatus, running into the petrous portion of the bone. A large clot of blood, an inch in thickness, was discovered, extending from the coronal to the lambdoidal suture. The middle meningeal artery was ascertained to be ruptured.

Case 3.—J. S., aged 33, was admitted into the hospital at 3 P. M., June 18th, suffering from compression of the brain. The following history was given by his wife. He has always enjoyed good health, and has been temperate in his habits. Five years and a half ago an ulcer formed, from what was supposed to be a boil on the left leg. Two years and a half subsequently, this "sore" was "dried up." Four months later, he was seized with a "fit," that lasted an hour before he became sensible again. The convulsion or fit occurred only once every year since. He has suffered constantly from pain in his head, with an inclination to sleep a great deal for the past two years. Last fall, a soft fluctuating tumor, of the same color as the surrounding skin at first, formed on his forehead, a little to the left of the mesian line, and soon afterwards inflamed, opened, and became a running ulcer. It has been in this state for the last six months. During the past week he has been in a stupid condition, and answered questions with great reluctance. Since the day before yesterday he has neither spoken nor taken any nourishment. He also has had difficulty in swallowing for the same period. His bowels have not been moved for a week past.

When he was brought into the hospital he presented the following symptoms, viz.: complete loss of consciousness, pulse slow and full; respiration stertorous, skin moist, tongue heavily coated, with a brown crust, sordes on the teeth and lips, and eyelids closed. At the bottom of the ulcer, the frontal bone could be seen, white, and denuded of its periosteum. The cicatrix of the old ulcer on his leg, is about an inch above the outer malleolus. No cicatrices of either chancres or buboes, can be discovered on his person.

Dr. James R. Wood was present when the patient was admitted, and trephined him immediately, in a sound portion of bone. On removing the bone, from three to four ounces of thick pus escaped, which was followed by a serous fluid. Through the opening, made by the removal of the dead bone, the operator passed his little finger its whole length into the abscess, which appeared to run into the left lateral ventricle of the brain. The sac of the abscess was very distinct. Immediately after the discharge of the pus, the patient rallied; his pulse became more frequent and smaller, his breathing lost its stertorous character, and his consciousness returned. He continued improving, and the next morning could answer correctly all the questions put to him, and would put out his tongue when asked to do so. There is some discharge from the opening. On the following morning, he was worse. His pulse ranged from 94 to 112, and his respirations were 30 in the minute; will neither protrude his tongue when asked, nor answer any questions put to him. He continued to fail until 12 M. the following day, when he died. He lived nearly sixty-nine hours after the operation.

Autopsy.—Three inches square of the frontal bone was found dead. On the left hemisphere, at a point corresponding with, and attached to this dead bone, was a ring of old false membrane, two inches and a half in diameter, and about half an inch in thickness, connected with the edges of the abscess, which involved the left lateral ventricle. The diameter of the abscess was one inch, and its length four inches. There was a considerable quantity of false membrane found at the base of the brain, which was otherwise healthy.

The lower lobe of the left lung was passing from the second into the third stage of pneumonia. All the other organs normal.

Case 4.—B., about 35 years of age, good constitution, was admitted into the hospital at 6.45 P. M. June 2d, 1857, suffering from compression of the brain, caused an hour before, by falling three stories, and striking his head against one of the beams in the lower floor. When admitted, he was perfectly comatose; pulse 120, full, and soft; respiration 32, and stertorous, loud mucous rattle in his trachea; both pupils dilated, and insensible to light; the right was more dilated than the left. Just above and behind the left ear, a depression was felt. There was pretty free hemorrhage from the left ear.

7.30, P.M.—Respiration 42, and stertorous. The hemorrhage from the ear still continues. He moves the left upper and lower extremities freely; he also moves the right arm occasionally; but he has not been observed to move the right leg, although all his movements have been closely watched.

9, P.M.—Pulse 96, full, and soft; respiration spasmodic at times. Loud rattles in his throat, caused, probably, by blood flowing into the larynx and trachea. He coughs occasionally. The right pupil is contracted, and the left is dilated.

10.10, P.M.—Dr. Stephen Smith trephined the skull, and removed several large pieces of bone that were loose. He scooped out over four ounces of clotted blood, that lay between the dura mater and the bone. The lips of the wound were then loosely approximated, and dressed with cold water dressing. Some hemorrhage occurred from the wound after it was dressed. The pulse, after the operation, was 122, and weak, and the respiration 39, and irregular. The pupils nearly the same in size, and insensible to light.

10.30, P.M.—A turpentine injection was given.

11.20, P.M.—Pulse 116, moderately full and quick; respiration 43, and deep; the rattle in his throat is very loud, and he coughs some.

12.30, P.M.—He died. For about five minutes before his death, blood welled up out of his mouth at each attempt at expiration. His pulse was almost imperceptible for some time. His respiration became very slow for about an hour previous to his death.

Autopsy.—It was found that the dura mater was very extensively separated from the bone. The pieces of bone removed, were portions of the parietal and occipital. The opening made was about four square inches in extent. It could not be positively determined, whether the base of the skull was injured, as the friends would not allow any more extensive examination.

Case 5.—J. McD., aged 30; good constitution, and intemperate in

his habits; was admitted at 9.30 A.M. Oct. 20th, 1857, suffering from compression of the brain, following a severe blow with a cart-rung on the previous evening. After receiving the blow, he fell down insensible, and has remained so ever since. He has had no medical or surgical attendance, but was allowed to remain in a cold entry-way until his removal to the hospital. On admission, he presented the following symptoms, viz. pulse 68, full and quick, respiration 23, and deep; both pupils dilated, the left more than the right, and both insensible to light, and his surface was warm and inclined to perspire. There was a contused scalp wound nearly over the upper and anterior portion of the right parietal bone. On probing this wound, a fracture with slight depression was discovered. It was reported by those who came with him, that he bled a great deal from this wound. Cold water dressings were applied locally. About a quart of urine was drawn by the catheter from his bladder.

10 A.M.—Pulse 60 and full, and his respiration deep, stertorous, and irregular. His breathing most of the time is like that of a person who is deeply narcotized. Both pupils alike moderately dilated, and extremely sluggish to strong light.

12 M.—Pulse 68, and of the same force, etc., and respiration 32 and heavy. All the other symptoms the same as at last note.

3 P.M.—Dr. C. D. Smith trephined the right parietal bone just anterior to the ascending branch of the middle meningeal artery. The dura mater was ascertained to be very extensively separated from the bone by effused blood, several ounces of which were removed; but there was still some remaining. There was free hemorrhage from the wound for some time after the operation; but it finally ceased of its own accord. The depressed portion of bone was elevated, and the wound dressed with cold water dressing. The pulse became feeble, 130, and the respiration 44. He continued perfectly insensible. The right pupil was a little more dilated than the left.

5.20 P.M.—Pulse 96 and very feeble, and his respiration nearly 60. The right pupil continues more dilated than the left. Remains perfectly insensible; some brandy and water given. An injection containing brandy was thrown up his rectum.

7 P.M.—Is moribund. His pulse is so feeble that it cannot be counted, and his respiration is 48 and hurried. The right pupil still more dilated than the left. No sign of consciousness. His bowels moved freely in the bed. He has not moved any part of his body since the operation.

8.15 P.M.—He died.

Autopsy.—No marks of external injury except a contused scalp wound, an inch and a half long, over the seat of fracture. Blood was found infiltrated in the cellular tissue of the scalp, and between it and the pericranium. The fracture in the parietal bone was a little over an inch in length. On removing the calvarium, a large clot of blood, external to the dura mater, was found, extending laterally under the frontal, parietal and occipital bones five and a half inches, and from the sagittal suture downwards to the base of the skull five inches. It was from a half to three quarters of an inch in thickness. It occupied the whole of the anterior portion of the middle fossa of the skull. The

dura mater was not ruptured at any point. The anterior branch of the middle meningeal artery was found ruptured nearly an inch from the main trunk by a sharp edge of the fractured bone, which extended into the groove for the vessel. The right hemisphere was very much compressed, and flattened. The convolutions were nearly all effaced. The anterior portion of the middle lobe was so compressed, as to be scarcely recognizable. There was no extravasation within the dura mater.

The liver was somewhat fatty. All the other organs were healthy.

Two Cases of Trephining. Reported by J. M. Farrington, M.D., House-Surgeon of Bellevue Hospital.

Case 1.—P. G., aged 51, was admitted to hospital, March 20th, with fracture of the skull, caused by a blow from a stone thrown at him, which struck him upon the left parietal bone, near its posterior superior angle. There was a fracture and indentation of the skull at the point, to the extent of an inch in length, and a quarter of an inch in width. He stated that he was stunned by the blow, and remained unconscious for more than an hour; and on the return of his consciousness, he found there was entire paralysis of motion of the right arm, and this existed at the time of his admission. The pupils were normal; the tongue, when protruded, pointed slightly toward the right side; pulse normal; mental condition rather dull. On the 21st, the operation of trephining was performed by Dr. Charles D. Smith. His condition at the time of the operation was the same as on the day previous. He complained of slight pain in his head. The depressed portion of bone was elevated, and removed. The dura mater was found to be lacerated, and a considerable hemorrhage came from it, which was controlled by a compress of lint.

Nothing noteworthy occurred until the morning of the 25th, when, on dressing his head, a portion of the brain substance was noticed protruding from an open point in the dura mater. This continued to increase in size. It was treated by a compress of lint, laid over it, and the flaps of the scalp drawn over the compress, and retained by strips of adhesive plaster and a roller bandage.

His condition gradually grew more feeble, paralysis of the arm continued, and paralysis of the right leg came on.

The fungus, which eventually became quite large, was by a uniform and constant compress, kept down, and the scalp was allowed to unite over it, while compression was applied over the scalp. The mental dullness became no better, and he passed his food and urine involuntarily; but on the 8th of April he grew better. His appetite improved, and the paralysis was less marked. His condition seemed gradually to grow more and more favorable, until about the 8th of May, when he again began to grow worse. On the 17th of May, he had a severe chill, and this was followed by others. He subsequently had phlebitis of the right leg, from purulent absorption. This was relieved by treatment.

The wound of the scalp closed, and the compress was left off, as the hernia cerebri was entirely relieved.

Paralysis of the right arm and leg complete. His condition continued low, and he gradually sank, and died on the 7th of August.

His death was preceded by convulsions, and he died comatose. Several days before death, a puffy tumor formed at the side of the hernia; this would be elevated at times, and depressed at others, and was inflamed by coughing.

Autopsy.—The brain and calvarium were removed together, and the brain examined from the base upward. On cutting into the third ventricle, on the left side, pus issued, and it was found filled with it. This was the base of an abscess, which extended upward and outward, to the point of fracture. The abscess was lined throughout its entire extent with a pyogenic membrane. The capacity of the sac, which was filled with pus, was about two fluid ounces.

The femoral vein was found to be perfectly occluded throughout its whole length.

Case 2.—J. R., aged 25, was admitted to hospital June 6th, with fracture of the skull, caused by the falling of a brick upon his head. The blow prostrated him, and he fell while in a state of unconsciousness from the first floor into the basement. He remained insensible for several minutes. Soon after admission, he had a convulsion; he had no paralysis, and no other symptoms of compression. Examination revealed a large depressed fracture of the postero-superior portion of the right parietal bone. Both tables of the skull were depressed over an extensive surface, and this surface was bounded by the irregular fractured border of the external table, while the internal table was broken under it for a considerable distance on all sides, and projected beneath it for the distance of from half an inch to an inch in a shelving manner.

Trephining was performed by Dr. James R. Wood, about fifteen minutes after admission. The depressed bone was elevated and removed; the pieces of the internal table, which projected beneath, as above described, were with difficulty separated from their attachment to the external table. They were all removed by a strong pair of duck-bill forceps. The clots of blood were removed, and the membranes were found to be uninjured. The usual treatment of rest, quiet, refrigerant drinks, attention to the bowels, etc., were observed, and the patient rapidly recovered without the supervention of an unfavorable symptom.

[To the foregoing cases, we will add the following cases of trephining, which have been handed us for publication.—ED. N. Y. JOURN. MED.]

Report of a Case of Trephining, followed by Necrosis, and ultimately, complete Closure of the Orifice by Bone. By M. E. WINCHELL, M.D.

I was called, April 25, 1857, to see a girl, 13 years of age, who, half an hour previous, had been hit on the head by an axe, thrown from a window of the fourth story.

Found her lying on the floor, where she had been placed, nearly helpless; extremities cold, natural intelligence considerably dulled, pupils slightly dilated, and partially sensitive, with rigors and a strong tendency to sleep.

There was a compound fracture of the cranium, with depression of bone, about half an inch to the left of the medium line, and parallel with it, three quarters of an inch in width, and three inches in length,

traversing the occipito-parietal suture, and commencing two inches anterior, and terminating one inch posterior to the suture.

On removing the patient to a bed, discovered partial hemiplegia of the right side, with entire loss of locomotive power in the corresponding leg. Dressed the wound, and ordered an aperient.

On the third day, there was some pain over the left orbit, with no abatement of paralytic symptoms, although the mind was perfectly clear and pupils natural.

Fifth day; intense persistent pain over the left orbit, considerable cerebral irritation, with general nervous prostration, and continued paralysis.

April 30.—Assisted by my friends, Drs. McAllister and Church, after the patient had been anesthetized, I inserted the trephine in the occiput, just anterior to, and at the left of the posterior angle of the depression, and removed one half of the depressed bone, consisting of a single piece, three inches in length, and three eighths of an inch in width, and elevated the corresponding half, which had not been completely detached. Found quite a large blood-clot, but no apparent lesion of the dura mater.

First day after the operation, patient was comfortable, with no pain, and but little interruption in walking. Pain commenced on the second day, and gradually increased till the fifth, when, on being hastily summoned, I found my patient in a low state of nervous prostration, and suffering from purulent absorption. Pulse almost imperceptible at wrist, extremities cool, respiration irregular, much jactitation, and some delirium.

Free incisions for the escape of pus, which was almost incredibly profuse, local antiphlogistic remedies, stimulants and nutritives, resulted in reaction, after a few hours of unremitting diligence; from which time she slowly but steadily improved, till her entire recovery.

On the tenth day, pain and paralysis had entirely disappeared, although the secretion of pus continued apparently undiminished. Most of the surgical scalp wound united by first intention, but the original wound and point over the bony opening, made by the trephine, remained unclosed.

Eighteenth day, strength and appetite pretty good, and considerable discharge of healthy pus.

Twentieth day, suppuration diminished, but yet abundant. Walks freely, and suffers but little inconvenience.

June 1st.—Scalp wounds uniting, pulsations of brain distinctly visible.

July 1st.—Some discharge of pus, continuous pain on making much exertion, easily fatigued.

Aug. 1st.—Discharge continues in diminished quantity, no inconvenience from the operation.

Sept. 1st.—Pulsations of brain no longer visible, but can be felt; parts becoming firm, some pus from surgical wound, pain after much exertion.

Sept. 15.—A point of bone appeared in the opening, which had allowed the escape of pus up to this time, immediately above the ex-

ternal lateral margin of the incision, made by the trephine, which proved to be the semi-circumference of this incision, of the thickness of the occiput at this point, and about one quarter of an inch deep, smooth on the concave surface as left by the saw, and jagged on the convex surface. Subsequently, several smaller pieces came away, bearing marks, indicating them to have come from the immediate neighborhood of the first. Suppuration continued till the first of October, about which time the last piece escaped.

During this extended period of suppuration, the health of the girl was fair, but not robust. In December following, her menses appeared for the first time. Being of a nervous organization, she had subsequently two slight attacks of hysteria. With this exception, her health has been since December unexceptionable. The scalp presents a slight depression in the site of the original wound, but is firm at every point on pressure.

The history of this case does not deviate materially from that of most cases of this class; but while it contributes its quota of ordinary facts to this branch of surgery, there is one that claims especial attention. That is, the escape of bone, between four and five months after the operation, considered in connection with the uniformly good health of the patient, the character of the bone, and the section from which it came.

Had the bone detached at the time the injury was inflicted, or only fractured, so that it ultimately became detached, and thus made its escape, or had it resulted from disease of the cranium, there would have been nothing remarkable about it. But when the operation was performed, the wound was thoroughly searched, and no fractured portion allowed to remain beneath the scalp—indeed, that half of the depressed portion which did remain, had been simply bent down, and not fractured. The character of the bone itself, shows clearly, that it came from a portion of the cranium, which was sound and healthy at the time of the operation, and remote from the injury.

We are forced to the conclusion, that necrosis must have been established in healthy bone, and removed in the short space of five months, and new bone subsequently replaced, for the arch of the cranium is now entire; and, as there was no evidence of inherent disease, that this disorganization of bone was brought about by the action of pus, which either burrowed beneath the calvarium to that point, or was a product of inflammation immediately subjacent.

I am not aware that a case, precisely of this description, has ever been reported; if so, it has escaped my observation.

2 Boorman Place, West 33d St.

Fracture of the Skull, with Depression—Trephining—Recovery. By J. Q. ADAMS, of Carmel, Putnam Co., N. Y. Reported by LEVI WARREN, M.D., House-Physician, Bellevue Hospital.

On June 29th, I was called to visit Mrs. Willit, aged 48, a colored woman. Upon my arrival, I found her reclining in an arm-chair, supported by several attendants, and covered with blood. She was talking incoherently concerning her head; appeared to be confused, looked wildly about the room, and was extremely restless if questioned or dis-

turbed, but if left alone was disposed to be quiet. There was no coma, no vomiting or nausea; the pulse was somewhat accelerated, but regular; her intellect did not appear to be affected, except the memory, which had now become so deficient, that she could not remember the name of her most intimate friend.

Upon examination, I found a large contused and lacerated wound of the scalp, on the forehead just above the right superciliary ridge, inflicted by some blunt instrument. I also found another upon the lateral and posterior portion of the head, making an incision three inches in length, going through the scalp directly down upon the posterior inferior angle of the left parietal bone, which was extensively fractured, much comminuted and depressed, being of an irregular and somewhat triangular shape. The depressed portion extended obliquely under the surrounding and unfractured parts, in such a manner as to render it impossible to elevate it without the aid of the saw.

It was found necessary, in order to elevate nicely the depressed parts, to make three applications of a small trephine. Upon removing these discs and a piece of the depressed portion, it was found that splinters of bone had pierced the meninges, and entered the substance of the brain. Upon elevating the posterior and inferior angle of the parietal bone, having the depression of the lateral sinus, venous blood gushed forth freely, but soon abated, and ceased altogether in a few hours. The ordinary dressings applied. I saw her again late in the evening; she had slept a little during the day; consciousness seemed somewhat impaired; she was rather drowsy, but easily roused, and would not answer questions addressed to her; she appeared to be insensible of her injury; there was no nausea; the bowels were quiet; pulse 52 per minute, and natural; ordered a laxative.

Tuesday, July 1st.—Patient slept at short intervals during the night. Her pulse is 60; skin hot and dry; tongue coated. Her mind appears much confused. She does not know that she has been injured; puts her hand to the head, and complains of a little pain; prefers the sitting posture. Bowels were moved by the laxative given yesterday. Wound looks very well. Ordered strict regimen and perfect quietude, and left her for the night.

July 2d.—She appears better, and is conscious that she has been injured; but has no recollection of what has transpired. Slept very well during the night, and had a few short naps through the day. Her pulse is 70; skin slightly moist; tongue a little coated. Ordered a seidlitz powder.

July 4th.—She is quite restless and impatient to day; complains of fatigue, and appears depressed in her mind. Pulse 120, feeble, with a hot and dry skin; tongue still coated, but moist. She complains of much thirst. Bowels moved once during the day.

July 5th.—Parietal wound discharging freely. The incision for the operation has united; pulse 100, quite full and strong.

July 9th.—Patient appears very much better, walks about the room a part of the time.

August 5th.—She is quite well, and has resumed her ordinary avocations and habits.

CRITICAL ANALYSIS.

ART. X.—*Human Histology in its relations to Descriptive Anatomy, Physiology, and Pathology.* With 434 illustrations on wood. By E. R. PEASLEE, A.M., M.D., Professor of Physiology and Pathology in the New York Medical College; of Anatomy in Dartmouth College; and of Surgery in the Medical School of Maine, etc., etc. Philadelphia: Blanchard & Lea, 1857. 8vo. pp. 618.

AFTER the appearance of such very complete works as those of Kölliker and Bowman on fundamental Anatomy, with the elaborate and profound treatises of Robin and Verdeil, and Lehmann on zoöchemistry, in our medical libraries, the preparation of such a volume as this of Prof. Peaslee's might seem to be a work of supererogation for the cause of science. But none so well as an instructor in these important departments of learning can appreciate and supply the wants of a class of students who require that text-books should present a classified and condensed arrangement of the vast stores of elementary facts which modern scientific researches have accumulated. This desirable object has been happily accomplished in the work before us, so far as the facts relating to the elementary and proximate constituents of the human organism are concerned.

The volume is admirably designed to supply the necessities of not only junior students, but physicians and all classes of scholars who have occasion to refer to the highest authorities on the subjects of which this work treats. Though exceedingly compendious and condensed, this treatise will be found sufficiently elaborate for the ordinary wants of students and professional men. Its illustrations are from the best authorities and are well executed. They impart peculiar value to the work, and do great credit to the publishers.

In his preface, the author states that the plan of the work was formed nine years ago; and he truly remarks that notwithstanding there have since appeared several works upon the subjects embraced in it, none of them have included its entire aim, viz.:

"1. *To give a connected view of the simple chemical elements, of the immediate principles, the simple structural elements, and the proper tissues, entering into the composition of the fluids and the solids of the human body.*

"2. *To associate with the structural elements, and the tissues, their function while in health, and the changes they undergo in disease.*"

This plan has been carried out in a most practical manner by Dr.

Peaslee, and in a mode which experience has proved most advantageous both in imparting and retaining knowledge on these subjects. The great synthetic expressions and phenomena of nature in the human organism are studied in connection with the analysis of the proximate and the ultimate elements and principles which enter into the constitution of the body.

After a few pages devoted to the separate consideration of the several chemical elements that enter into the composition of the animal tissues, the author proceeds to a very careful investigation of the various immediate or proximate principles of which the human body is constituted. The classification that he makes of those proximate elements is exceedingly simple and natural. The chapters relating to the elementary principles, proximate and ultimate, comprise the first hundred pages of the volume.

The second part of the work consists of three divisions, containing :

"1. *A description of the simple histological elements, their distribution, development, etc.*
"2. *Of the fluids in the human body which contain histological elements.*
"3. *Of the tissues, properly so called.*"

The first division is, of course, principally devoted to the history of cell-life, and the development of the various tissues. The essential facts in cytology are stated with great clearness, and the text is profusely illustrated with well executed drawings. The illustrations and remarks respecting the essential and morphological characteristics of cancerous growths are eminently clear and practical.

It is an interesting fact that the study of the microscopical characteristics of pathological or abnormal structures and tissues has been the most fruitful source of advanced and corrected views respecting the intimate structure of normal tissues. We believe it was affirmed by the brilliant but lamented Dr. W. J. Burnett, that the most correct view of the nature and origin of cells has been derived from the careful study of the development and structure of morbid growths, and that, *because* they are *infra-formations* associated with higher and normal tissues.

So it is,—the laws of life and health are often most successfully learned from the observation and study of diseased conditions ; and, not unfrequently are modes and means of cure suggested by the phenomena and events of disease in its incurable stages, and sometimes indicated indeed by the revelations of the cadaver itself. It is also worthy of remark, that by the chemical and microscopical study of the products of *disassimilation* we are often able to throw a flood of light upon some of the most occult phenomena of both diseased and healthy vital functions. Those who lightly esteem the practical importance of histological and pathological studies certainly fail to perceive the most essential grounds of progress in the healing art. Those forms and processes of organic life that are most deeply hidden are generally the most practically important ; and the more closely we interrogate nature, the greater

becomes the necessity, and the greater the opportunity for enlarged, philosophical, and practically useful generalizations and deductions from the elementary truths so brought to light.

These ideas are suggested, and aptly illustrated, by the history of cytology, as a department of histological knowledge, in its physiological and pathological relations. The rude glasses of Malpighi, Leeuwenhoek, and Hewson, served to make known a tolerably correct knowledge of the morphological elements of the circulating fluids; but the hasty deductions of the medical philosophers of that day, resulted only in fanciful theories like that of the *error loci*, etc. In our own times, with perfected instruments and careful analysis, the microscopical observations of Wagner, Purkinje, Schleiden, and Valentin, supplied the reliable data from which the philosophical mind of Schwann was enabled to invoke the true philosophy of cell-life, in its relations to the growth, and the metamorphoses of the animal tissues. Assuming the nucleated cell as "the fundamental expression of organic forms," and keeping in view the grand idea of unity of design in the formative plan of vital organisms, the study of microscopical anatomy—normal and pathological—has been carried forward with such signal success by Kölliker, Bischoff, Burnett, Lebert, and others, that an intimate knowledge of what is known respecting cell-life and of histology generally, has become the indispensable basis of correct views in pathology and diagnosis.

Dr. Peaslee has given a valuable summary of facts, under the second division of his treatise, relating to the various fluids and secretions of the human body. All of his definitions, descriptions, and remarks, are definite and suggestive, while as a general thing, the most advanced views respecting the chemistry, and physiology of the animal fluids, are clearly stated. In no treatise have we met with a more complete and valuable summary of these facts, and no writer has treated the subject more philosophically.

Though the great work of Lehmann is pretty closely followed as the highest authority on the subject of vital hydrology, our author does not hesitate to adopt conclusions differing essentially from those of that learned writer; as, for example, after giving a careful account of the morphological elements and the physiology of the circulating fluid, he states that:

"Lehmann's idea that the blood-cells are laboratories, in which the individual constituents of the plasma are prepared for the higher function of aiding in the formation and reproduction of the tissues, is hardly tenable, since the nutrition of the tissues is equally perfect, as far as can be perceived, in animals whose blood is destitute of this histological element. Indeed, that the red blood corpuscles have any direct relation to the formation of the tissues, is very improbable; dis-assimilation, being, it is believed, their special function."

The chapters devoted to the urine, and the various other secretions and fluid products, normal and diseased, are beautifully illustrated, and filled with practical suggestions and conclusions.

In the third division, which comprises more than half the volume,

the histological characteristics of the various tissues are examined in the following order, and with as much minuteness as the limits of such a work will allow:—1. Epithelium; 2. Yellow fibrous tissue; 3. White; 4. Areolar; 5. Adipose; 6. Cartilage; 7. Osseous tissue, and the bones and dental tissues; 8. Contractile tissue; 9. The structure and special combinations of tissues pertaining to the several viscera, and to the organs of special sense.

The definition and descriptions of the various histological elements are exceedingly clear, and the microscopical illustrations are very numerous, and in the highest degree satisfactory. Though these are acknowledged to have been drawn principally from Kölliker's classical treatise, they possess sufficient originality, and are in conformity with the most advanced views at the date of publication. The various physiological, pathological, and general anatomical relations, which the several histological elements specially sustain, are abundantly illustrated, and briefly explained; thus rendering every chapter eminently practical, and therefore interesting to the student.

It should be mentioned, that measurements, or dimensions, of the minute structural elements have been reduced by Dr. Peaslee from the French to the English standard, the fractions of inch being given instead of millimeter—a service that every author of an American or English book should imitate.

The completeness and simplicity of Dr. Peaslee's work constitutes one of its crowning excellences as a class-book for students. But its greatest merit consists in its successful fulfillment of the author's original plan of making the elementary histological facts directly illustrative and explanatory of the great practical questions in physiology and pathology. Hence this treatise will be found eminently useful to the practitioner as well as the junior student. No physician should fail to possess the book; and those who have not already become familiar with all the advances in the department of knowledge of which it treats, will consult its pages with peculiar satisfaction and advantage. It is not necessary that every busy practitioner of medicine possess and work a microscope, in order to attain to a correct knowledge of fundamental anatomy, or of pathological products. But every physician must know the basis upon which scientific medicine now rests, and should be able to appreciate the nature and evidences of pathological and physiological changes in the human body, if he would minister intelligently and successfully to the sick, or properly teach the laws of health. We believe that every physician, however meagre or however superior his attainments in the exact and fundamental departments of knowledge, upon which medical science depends, must rejoice at every successful attempt to apply the elementary truths of histology and chemistry to the practical purposes of exact pathology, which is the basis of accurate diagnosis, a rational therapeia, and correct rules of hygiene; and such, manifestly, was the original design of Dr. Peaslee in preparing this treatise. This design is happily seen in the sections relating to the epithelium, the fibrous tissues, the skin and the mucous membranes, and in the chapters on the glandular and other viscera. The special

histology of the several parts is studied in connection with the physiological anatomy, and the pathological conditions of the organs. This constitutes a most valuable and original characteristic of the book—a merit highly important to the busy practitioner, as well as to the young student of medicine.

As our space will not allow us to give an extended analysis of the body of the treatise, we will close this notice of the volume by venturing a brief practical suggestion, respecting the higher development, and more extended applications of histological and elementary physiological knowledge generally.

The revelations of the microscope, in regard to the elementary or morphological constitution of vital organisms, are acknowledged to have thrown much light upon the phenomena and processes of life in those organisms; while morbid changes therein have, by the same means, been investigated with equally happy results. Hence, great improvements in our means of diagnosis, in various maladies, and also much advancement in our knowledge of the etiological and the special pathological history of some diseases. But the practical applications of such elementary knowledge, are yet too limited, particularly in respect to therapeia, prophylaxis, and hygiene. Many ultimate principles, also, that yet remain undiscovered in the arcana of vital existence, and which seem to be foreshadowed by discoveries that have been made, seem requisite to the complete triumph of science and art over the removable causes and consequences of disease.

These great ends of scientific research would seem to be measurably attainable, and whoever would make signal advances towards such triumphs, must do something more than invent improved instruments, or discover new elementary facts. Vast stores of elementary facts have already been accumulated, and the typical forms of organic life have been beautifully displayed, by aid of the microscope. But are we to make no advancements beyond a simple knowledge of primordial and structural cell-life, as taught by Schleiden, Möhl, Schwann, Burnett, and Kölliker; and shall we only attempt to emulate the discovery of Ascherson and Bennett, in searching for primordial utricles? Could we, with material agents, analyze the vital principle itself, comparatively useless would be such an achievement, though we demonstrated the identity of electricity, and the *vis nervosa!*

Other powers and richer fruits than those of the most far-reaching analysis are required for the improvements most important to the practical science and art of medicine: the analysis we require, as an essential antecedent to the greater powers and wider scope of *synthesis.* But we most require to know the significance of the elementary facts already accumulated, that we may invoke therefrom, great practical principles: not hypotheses and useless theories, but logical deductions; or, at least, direct teleological conclusions.

Guided by the never-varying principle of *unity of plan,*—a fundamental law, everywhere seen in the Creator's works—we may yet find the true interpretation of all the phenomena and laws of the structural and vital homologies, discoverable in those vital processes, healthy and

diseased, that now baffle the powers of simple analytical research. In the successful investigation of nature, her *physical* phenomena and various forms, should be studied in connection with the *teleological* expressions and indications of those forms and phenomena; and immediately upon the conclusions of extended and reliable *analysis*, should follow the most philosophical and rigid deductions and generalizations. The prolific fruits of analytical studies in organic chemistry and microscopical anatomy, need to be gathered up, examined, and re-examined, in connection with all that is known in special and comparative physiology, and from the correspondences, types, and the community of plan discoverable therein, may yet be evolved the most occult and intricate laws of life, disease, and cure. And we conceive that we are warranted in believing that scientific medicine, in the departments of experimental research and teleological study, offers greater prizes, and higher honors, than did the field of cosmology to Kepler and Newton; for, "*Natura in minimis maxima est.*" In reserve for the medical philosopher who shall perfect the investigations, and prepare the treatise, relating to the ultimate histological facts and physiological truths that rational medicine *now demands*, are honors that will inscribe his name on the same scroll with the illustrious names of Harvey and Jenner, Hunter, Bell, and Marshall Hall. E. H.

ART. XII.—*The Principles and Practice of Obstetrics, including the Treatment of Chronic Inflammation of the Uterus, considered as a frequent cause of Abortion.* By HENRY MILLER, M.D., Professor of Obstetric Medicine in the Medical Department of the University of Louisville. Pp. 620. Philadelphia, Blanchard & Lea.

THIS is essentially an American work on obstetrics, and its author promptly recognizable as one "addictus jurare verba nullius magistri." In the progress towards the formation of a national school of obstetrics, there seems every reason to believe that the liberality of sentiment characterizing the national mind, joined to the practical tests applied to all theoretical suggestions, must eventually furnish us with principles for our guidance, combining most of the excellences and few of the defects recognizable in other countries.

We are peculiarly placed; no national jealousies frowning on suggestions from any quarter, and in addition to the acquaintance with literature in foreign tongues, which may be everywhere met with in our country, crowds of well educated gentlemen who have settled among us, bring to the bedside, the review, and the medical society that personal knowledge of methods of treatment proposed in their native countries, which at once familiarizes the practice; and again, their frank appreciation of the relative status of their countrymen soon enables us to learn that Dr. So-and-so is a visionary and impracticable enthusiast; Dr. This, a man who writes for practice or notoriety, and would not scruple to lie on occasion; while Dr. That, on the contrary, is a quiet, trustworthy man, devoted to science, truthful, sincere, and to be believed.

It is impossible to overlook the influence of this on a class of practitioners forming the bulk in every country, who have not travelled, are not over educated, read little, but pick up with great shrewdness in conversation and professional intercourse, facts of value to themselves.

The work before us is that of a gentleman, evidently truthful, reflective, hearty in his likes and dislikes, and, all things considered, eminently sound in his teachings. Like the majority of our treatises, the vast attainments of the Germans are here overlooked, while the medical literature of Great Britain and France are familiar as household words, and the element distinctive of the new and exact school of teachers lacking, viz.: basing statements not on the ipse dixit of the author, but upon cases recorded at length, at the risk of allowing a skillful critic to turn the batteries against the author himself. This is fast becoming an essential feature, the effect of which on hasty statements and on sound medical instruction, cannot be over-estimated.

To follow the many tempting leads offered in this work would be an impossibility, with the limits here assigned, and the cursory character of the notice can be the more readily reconciled to the reviewer's mind, as he can heartily recommend the book, not in the hackneyed phrase as one "without which no physician's library can be considered complete," but as instructive and suggestive to the student, and refreshing to the obstetrician, from its manliness and the straightforward way in which all questions interesting to the author are met.

The chapter on clinical exploration of the pelvic organs is interesting, but in the opinion of the reviewer scarcely goes far enough. Dr. Miller has proposed the combined use of a tubular speculum, shortened on its pubic border with a sound which he thus introduces through the exposed os uteri, and his argument is chiefly the advantage thus derived from seeing blood or sanguinolent mucus issuing from the os uteri under certain circumstances. This seems to us to be very slight, inasmuch as the fingers could convey the intelligence quite as certainly, while in difficult cases we are convinced that introduction of the instrument may be only possible when the uterus is steadied by a finger passing well behind the cervix. However, that is a matter in which individual fancies are entitled to full play, when the diagnostic uses of the instrument are so fully appreciated; but it seems to us that the tendencies of Dr. Miller's teachings are to discourage the digital examination of the ovaries. Now, while we agree with our author in insisting on the sound for appreciation of many displacements, and strongly tend towards the belief that many displacements, incurable, but unattended with inflammation, do not merit the exaggerated attention which they receive, we yet know, from bedside observation, that the rationale of persistent painful symptoms may be frequently found in enlarged, inflamed, or displaced ovaries, perfectly appreciable to the touch.

And we confidently expect that the time will very shortly come, when no uterine exploration can be considered as thoroughly satisfactory which has not at least endeavored to reach organs which we can frequently touch, and which often throw a flood of light on obscure

symptoms ; and we have seen cases where competent men have blindly followed the routine appreciation of displacement and ulceration, without ever thinking to inquire whether enlarged or displaced ovaries might not be within reach, and most exquisitely painful to the touch ; and we hold the statement of Dr. Miller—"I fear that the frequent rectal search for it (ovaritis) may debase the sexual organs in our estimation," to be either a quiz or a puerility.

To show, though, how far Dr. M. is from indulging in puerilities, it may be well to say that he confesses to having accidentally brought on an abortion by the sound on one occasion, while on p. 180, when referring to a case in which, by delicate professional conduct, he saved a brother chip's reputation, he thus truly remarks :

" If all the errors of diagnosis which the wisest of us have committed were duly chronicled, I opine that a large hiatus in our libraries would be compactly filled with choice reading. For my own part, I own that if I have not fallen into this precise error, I have into others quite as egregious ; and I imagine that no one ever practised medicine long without having his self-esteem abated by his manifold blunders."

The whole chapter on the prophylactic treatment of abortion, which discusses the vexed questions of managing diseases and displacements of the unimpregnated uterus, may be read with great interest and profit. He discards pessaries and intra-uterine injections; but in reference to a very difficult class of cases, remarks :

" After I had discarded pessaries in the treatment of endo-uteritis, complicated with retroversion, I was led to conjoin repeated replacement of the uterus by the sound and cauterization of its cavity, while the organ was in situ, and by this method of treatment, which I may venture to call my own, have obtained more satisfactory results than by all other methods which I had previously tried."

The value of this can be indorsed by the reviewer ; but, in his judgment, there is no sound that, for this purpose, can be compared with the sound made by Tiemann in this city. This is a No. 10 catheter, which can be flexed at will by a screw in the handle. By this, after replacing the retro-flexed organ, you can leave it abruptly ante-flexed, a contingency provided for by no other instrument, and of positive advantage.

Chloroform is used by Dr. M., who supports the advantages from anesthetics in labor by forcible arguments.

"*Meddlesome midwifery is bad, but a shily-shally midwifery is worse,*" says Dr. Miller ; a key note to the temperate and yet determined manner in which he enters the lying-in room. But his recommendation to perforate the head of the living child when puerperal convulsions awaken just apprehensions for the mother, " whilst from the tedious manner in which the dilatation of the os uteri is going on, it is wholly uncertain how long we must wait before delivery can be accomplished by the forceps," seems to us calculated greatly to mislead the practitioner relying on Dr. Miller alone for advice.

Why not advise the douche to dilate the os? Why not recommend the alternative of incision of the cervix rather than the murderous use

of the perforator? Why not show how small an amount of dilatation is necessary for a slender pair of forceps?

Until our magnates in obstetrics will appreciate more clearly the capabilities of the forceps, and avoid more carefully the sinful errors of the British school in this direction, we, as a nation, will not have attained the position in obstetrics to which, by the aid of Dewees, Meigs, and Miller, we are certainly tending. G. T. E., JR.

ART. XIII.—*Researches on Primary Pathology, and the Origin and Laws of Epidemics.* By M. L. KNAPP, M.D., late Professor of Materia Medica, and President of the College of Physicians and Surgeons of the University of Iowa, etc., etc. 2 vols, 8vo., pp. 312 and 336. Philadelphia: Published by the Author. 1858.

DR. KNAPP, some years ago, published certain essays upon Cholera, Puerperal Anæmia, etc., announcing his belief that those and many other maladies depend upon a scorbutic diathesis. The medical public, therefore, will not be surprised at the appearance of an elaborate treatise from the same author, "claiming to set forth the *vera causa* of not only Epidemic Cholera, but of every other epidemic form of disease, yea"—as the author boldly adds—"of all sporadic diseases.

As Dr. Knapp has in these volumes frankly and fearlessly published to the world "new doctrines," as remarkable as they are universal and important if true, we are called upon to examine carefully the views and the facts he has presented, giving utterance to our own impressions on the subjects discussed in the volumes as frankly as their author has made known his opinions.

The work "claims to unfold the primary pathology of disease." The first volume comprises separate essays on—1, Epidemic Cholera; 2, Cholera Infantum; 3, Nursing Sore-Mouth, including chapters on the medical topography of the State of Illinois, the nature of malaria, with cases and deductions. The second volume is devoted to the defence of the following laconic and rather indefinite thesis: "The scorbutic diathesis is primary pathology." The essays comprised in the first volume are, in many respects, interesting and practically important; but the labored résumé of facts and opinions relating to scurvy, we think, will fail to convey to the reader's mind the important idea that has become so strongly fixed in the mind of the author, viz., that scurvy is the type of all disease, and that *all disease* is really and essentially scurvy.

Dr. Knapp has certainly made himself quite familiar with those scattered waifs of medical literature reciting the history and phenomena of scurvy; and these, but for his industry and enthusiasm, would probably never have been arranged with such care. We may thank our author for this gratuitous labor, though the terms scurvy and scorbutic diathesis have always been used without any very definite pathological signification. Fortunately for his purposes and for his philosophy, Dr. Knapp has fully appreciated the fact that these terms have been so indefinitely and loosely applied that he hazards no essential

pathological facts in uttering the following remarkable language: "We plant ourself on the eternal rock of this induction, that where nutrition fails, from whatever cause, scorbutic pathology begins, generalizing disease to a known and an adequate cause, through all the world's history. We are satisfied that this is indeed the truth; that the insidious, latent, morbid condition of the system, known as the scorbutic taint or diathesis, was, is, ever has been, and ever will be, the *fons et origo* of all general diseases, or of universal pestilence."

By means of the testimony or sketches relating to scorbutic disease —as given by ancient and by modern writers, from Hippocrates to Eugalenus, Lind, Blane, Budd, and Barnes—these sweeping conclusions are made clear to our author's mind, if not to the minds of his readers. Even Hahnemann, with his hypothetic "*psora*," and Dr. Rush, with his unproven theory of *unity* of disease, are triumphantly summoned to this labored demonstration of Dr. Knapp's monopathological doctrine of universal scurvy.

Fortunately for his argument, but, we think, unfortunately for the soundness of his philosophy and his pathological generalizations, Dr. Knapp has studied cholera and nursing sore-mouth, in their etiology and their special pathology, as great types of disease in general. Now, in regard to the maladies just named, it perhaps may, with some propriety, be claimed that they originate and extend mainly by virtue of those erroneous dietic habits and faulty hygienic conditions which are productive of the scorbutic diathesis; but no intelligent observer will deny that there are multitudes of diseases that occur under conditions quite the reverse of such as induce the scorbutic diathesis. Witness most of the phlegmasiæ.

As before remarked, we cheerfully accord to the essays comprising Dr. Knapp's first volume, the merits of having recited most interesting etiological and therapeutical observations and facts, and of suggesting important ideas respecting proximate causes of the maladies treated of in that volume. But we doubt whether the facts relating to the most important of those maladies, viz., cholera, could warrant us in adopting the language of our author, when he states that he is "forced to the conclusion that cholera is but a modified form of scorbutus, and a hemorrhagic termination of latent scurvy."

In the essays on *cholera*, *cholera infantum*, and the *nursing sore-mouth*, the author has adduced an array of facts, etiological, pathological, and therapeutical, that goes far towards the confirmation of the theory which he has been led to adopt respecting the essential pathology of those diseases. But he has evidently taken a partial view of the subject, as his reasonings fail to account for the fact that the cholera originated and has made its greatest ravages among the vegetarians of Hindostan; and also that the fruitful valley of the Genesee, and the prolific borders of our inland lakes have been the localities where the nursing sore-mouth has extensively prevailed; rather than our densely populated cities and the woodlands of mountainous regions where the people are far more carnivorous than in the regions first named, and quite as generally so as the population in the Mississippi valley.

While we believe that Dr. Knapp has called attention to a very important class of facts relating to the etiology of epidemic cholera and cholera infantum, we conceive that he overlooks the evidences of that special epidemic meteoration which so clearly stands connected with every epidemic disease. However important and predisposing may be the scorbutic diathesis to the development or the spread of cholera and the nursing sore-mouth, there manifestly is another and more essential cause without which those maladies never become epidemic. The prevalence of those maladies among a fruit-eating and vigorous population would seem to disprove Dr. Knapp's hypothesis that scorbutus arising from too exclusively animal diet, or that blight, famine, and impaired nutrition uniformly precede and produce those diseases.

The etiological history of the diseases just named having been traced by Dr. Knapp to what he believes a special dyscrasia arising from impaired nutrition, he has undertaken, in his second volume, the great task of determining the vexed question of what constitutes the exact and earliest *point d'appui* from health, or what the *primary pathology* of all forms of disease. Having arrived at the conclusion that the scorbutic diathesis is the primary pathological condition and proximate cause of all diseases, our author closes his treatise in the following language, which aptly illustrates the importance of his philosophy, if true: "The doctrine of the unity and scorbutic pathology of disease is a great truth or a very great fallacy. . . . If true, it upsets the hypothesis of malaria, zymosis, epidemic influence, occult qualities in the air, etc., etc., as causing disease; and substitutes known natural causes, acting simply by impairing the nutritive function."

Claiming that "the doctrine of the scorbutic pathology of disease is an innovation as bold in medical philosophy as the Galilean theory was in astronomy" (p. 155, vol. ii), Dr. Knapp has allowed his mind to become surcharged with an enthusiasm such as the philosopher experiences, when some great discovery leads him involuntarily to exclaim, Eureka! Eureka!!

But we sincerely regret the lack of charity which leads our worthy author to say, "The probability is, judging from the past, that the truths of our doctrine will never be admitted while there is a shot left in the locker of the old Hull of Physic." Indeed the writer seems to have so nourished the phantom of an incredulous bigotry and opposition, which he has unnecessarily anticipated from his professional brethren, that many of his pages assume a style that is remarkably polemical for scientific literature of the present day. The fact is, Dr. Knapp appears to entertain a somewhat contemptuous opinion of the existing status of what is generally accepted as scientific medicine, for he asserts that "Practical medicine is, as yet, without its alphabet of first principles, entitling it to be ranked among the exact sciences" (p. 334, vol. ii). But much as he deplores the unprogressive state of medical science and of the popular mind of our profession, he finds evidences of advancement in therapeutical philosophy. "Lemon juice and the salts of potash are now taking the place of the lancet and mercury in the treatment of rheumatism and the phlegmasiæ; cod-oil and whisky-punch

the place of pukes, and v. s. in phthisis pulmonalis; sulphuric acid the place of calomel in cholera; and these changes in therapeutics (adds Dr. Knapp) only find their solution in the scorbutic pathology of those exceedingly grave maladies."

It would appear, from various passages in these volumes, that Dr. Knapp gives to the term scurvy or scorbutus an exceedingly wide signification, and a definition so peculiar and so universal in its application, that it actually becomes synonymous with his opening thesis, viz., that "*the scorbutic diathesis is primary pathology;*" or that scorbutus is the essential element of all diseases,—the first deviation from health.

In attempting to give a definition to the term scorbutus, Dr. Knapp closes by saying, "The scorbutic diathesis, then, is the natural negative of health, or want of health; and is plainly the impairment of health, or beginning of disease. The word *scorb*, in the Sclavonic language, signifies *disease;* hence the name scorbutus (disease-utus), according to Lind." Again, he says: "Our doctrine maintains not only the adventitious acquisition of the scorbutic taint, but the hereditary transmission of it also; that the organization or form of offspring is moulded, fashioned, or stamped with it, under the parental defects in nutritive or formative life. It is, then, the *predisposition* to disease of all writers who use this term." . . . . "This state, then, is the *first link in the chain of disease*, or the *predisposing cause*. Our philosophy, then, clears away the obfuscations in pathology, digs to the bottom, and unfolds the *primary pathology*, the root of all diseases." And finally, this conclusion: "The symptoms of disease, then, are only evidences of any antecedent morbid condition the cause and nature of which are wholly unknown, except so far as scorbutus is concerned. It is but a just inference, therefore, to say that the symptoms of disease are, in all cases, but the wailings of the thousand-and-one forms of scurvy—rebellious accents against obstructions af the nutritive function; that the objective signs are more earnest appeals and warnings still, and the anatomical characters are so many lamentations over the insufficiency of our art. Neither the symptoms, objective signs, nor anatomical characters constitute the disease which lies anterior to all these, and is, as we have before said, a negative, a condition of want, a want of nutritive life, impaired nutrition, obstructed nutrition, *inlaid scorbutus*. Disease, then, in its essential nature and *primary* pathology, is a unit."

We admire this bold and definite declaration of opinion, and will forbear all comment; albeit, we confess a constitutional inability to fathom the ultimate penetralia of *life*—physiological and pathological, which to our author's comprehension seem as familiar and as experimentally demonstrable as the simplest formulæ and analyses of chemistry.

We believe that Dr. Knapp has done good service for humanity, by calling attention to the vast importance of those natural provisions for suitable nutrition, and those general hygienic conditions which are essential to healthy animal life, and which are too often disregarded alike by the learned and the ignorant, the affluent and the poor. Our author's views on the subject of hygiene, in its relations to prophylaxis

and a simple therapeia, are of the most practical character, and should be heartily indorsed and practically illustrated by physicians. A religious observance of the laws of life and health,—not the theories of philosophers and the drugs of the apothecary, is the agency by which primeval health and vigor are to be restored to the human race.

By the following passages it will be seen that notwithstanding the means of relief from the curse of scurvy, as the source and essence of disease, seem to be very simple and easily applied, there exists an insurmountable difficulty in the way of the perfect physical regeneration of man, and that there is a fearful probability that even *physically* "in Adam's fall we sinned all." "There is but only (!) one law of healing —re-invigorating the nutritive function" . . . . "Nobody is clear of some degree of latent scorbutus. If the effete elements or waste of the tissues could be disposed of and exonerated from the system without being returned into the bloodvessels, and a perfect dietary always supplied, we *might begin to look* for purity, health, and entire exemption from any scorbutic taints; but as the case stands, *and ever will stand, the seeds of scorbutus are forever in us, even the most healthy.*"

In both these volumes, we find many valuable suggestions respecting personal hygiene, and the sanitary relations of the various occurrences in the natural world, that may be regarded as having a direct bearing upon the health of individuals and communities; viz., blights, drought, premature frosts, protracted winters, and short summers, immature fruits and vegetables; all of which certainly conduce to the impairment of physical health. The author fortifies his general deductions, also, by analogies drawn from the history of *epizoötics* and *epiphytics* (we use the latter term in a special sense), and there is no field of study more inviting to the epidemiologist. But even here Dr. Knapp has been tempted into some very untenable conclusions: Quoting from the Census of Ireland, under date of August 18th, 1847, as follows: "There was a failure in the beans, from a disease, similar to that in the potato. In the month of September, some blight was observed upon the grain crop.

"In those parts where the population hitherto mainly subsisted on the potato, it was raised with great facility on the mountains, by burning the peat soil, and setting potatoes on the ashes." Dr. Knapp confidently (we would not say blasphemously, for he but repeats the words of impious Iago), remarks: "*Here is confirmation strong as holy writ,* of the truth of our proposition, that the want or lack of the salts of potash, lime, soda, iron, etc., etc., is the secret of the whole matter of the 'potato rot,' blight of grapes, failure of crops, etc." These great epiphytic diseases have been very carefully studied, and from our own knowledge of the facts on the subject, we are warranted in stating, that the foregoing conclusion is utterly erroneous. We do not presume to call in question our author's assertion that, in these days, "every potato is a sick potato, and has the scurvy," but we are surprised at his readiness to adopt and publish such sweeping conclusions and hasty generalizations as fill these volumes, while the moot questions he assumes to settle, present many a hinge and loop to hang a doubt on.

Without desiring to take advantage of Dr. Knapp's peculiar infelicities in logic and style, we doubt not his readers will often be reminded that he might properly have quoted the couplet from Iago complete—

> . . . . . "*Trifles light as air,*
> *Are to the jealous*, confirmations strong
> As proofs of holy writ." . . .

We think no one can mistake Dr. Knapp's ideas respecting the nature and relations of scurvy and the scorbutic diathesis. He has given to his definitions and assertions a degree of precision, and an air of absolute demonstration, that is quite unusual for medical writings. If our author's philosophy be sound, and his interpretation of facts correct, then it may be conceded that his claim to the grandest discovery in the history of medicine is fully substantiated. We have carefully examined the three hundred pages of testimony—quotations from all classes of writers on scurvy and epidemics, adduced in the second volume, to confirm the fundamental premises of the doctrine taught in this treatise, viz., that *disease is a unit*, and that unit *scorbutus;* and we confess our inability, by any process of logical deduction and scientific generalization, to arrive at the conclusions with which Dr. Knapp lays the foundation of his philosophy.

Having with much pleasure, some years ago, perused the essays comprised in the author's first volume, and firmly believing that some general dyscrasia and deviation from health often precede and accompany the extension of fatal epidemics, we are glad to have found much in the second volume which illustrates this and other laws of epidemics. But, from a constitutional inability to believe that which is not clearly proven, or at least made consistent and harmonious with the truths we do know, we feel compelled to confess ourself yet remaining in the "old Hull of Physic," a disbeliever alike in the doctrine of unity of disease and the hypothesis of universal scurvy; but with no "shot in the locker" for such a genuinely frank and honest searcher after truth as the worthy author of these volumes. E. H.

BIBLIOGRAPHICAL NOTICES.

ART XIV.—*Elements of Inorganic Chemistry, including the applications of the Science in the Arts.* By THOMAS GRAHAM, F.R.S.L. and E., late Professor of Chemistry in University College, London. Edited by HENRY WATTS, B.A., F.C.S., and ROBERT BRIDGES, M.D. Second American, from the Second revised and enlarged London Edition, complete in one volume, with two hundred and thirty-three illustrations on wood. Philadelphia: Blanchard & Lea, 1858, pp. 852.

WE have in this volume the completion of Prof. Graham's great work on Inorganic Chemistry; the first part of which appeared as early as 1852. In order to introduce all the improvements and discoveries that have been made since the issue of the first part, an appendix has been

added to the second part. In its present form it is, therefore, an extended and most complete treatise on inorganic chemistry. To the student of chemistry, we recommend this volume as the latest and most reliable work on that branch of chemical science.

ART. XV.—*Contributions to Operative Surgery and Surgical Pathology.* By J. M. CARNOCHAN, Professor of Surgery in the New York Medical College, etc. With illustrations drawn from nature. Philadelphia: Lindsay & Blakiston, 1858.

THE publication before us is the first of a series of ten numbers; one of which is to be issued quarterly, of quarto size, and containing from thirty to sixty pages each. The present number contains the following articles: *Case of amputation of the entire lower jaw; Remarks on amputation of the lower jaw; Elephantiasis arabum, successfully treated by ligature of the femoral artery, with cases.* These papers originally appeared in this Journal, excepting several cases under the latter head, which were published in the *N. Y. Med. Gaz.* The lithographic illustrations which accompany the work are most beautifully executed, and the paper and typography of the number are all that could be desired at the hands of the publisher. The author has dedicated his volume to GULIAN C. VERPLANCK, ESQ., President of the Board of Commissioners of Emigration, and in a complimentary but graceful epistle, commends his contributions to the perusal of his preceptor, PROFESSOR VALENTINE MOTT.

Though the scope of this work is limited, being confined to the detail of the more remarkable cases occurring in the author's practice, with remarks thereon, we can but regard its publication with favor. So frequently do our best surgical writers give us as their final contribution to the literature of surgery, a formal treatise, containing little if any of their own experience, that we welcome most cordially a work like this, devoted entirely to the author's own practice, and fresh with his own individual and independent views. PROF. CARNOCHAN has thus set a good example for our older surgeons, some of whom, crowned with all the honors which our profession can bestow, and ripe in the experience which position and influence can give, are about passing from among us, without leaving behind them any more permanent record of their knowledge than remains in the memory of their contemporaries.

ART. XVI.—*A Manual of Medical Diagnosis: being an Analysis of the Signs and Symptoms of Disease.* By A. W. BARCLAY, M.D., Philadelphia: Blanchard & Lea, 1858, pp. 423.

THE author of this volume has been medical registrar of St. George's Hospital for upwards of ten years, and during that time more than twelve thousand patients came under his notice. This work is the result of his labors in the investigation of diseases, both before and after death. With such unlimited facilities, it is offered to the profes-

sion, in the hope that it may lead to a more familiar acquaintance with disease, and a better understanding of treatment.

We have examined this work attentively, and with the most unqualified satisfaction. It is a chart for the guidance of the clinical student and the young practitioner in the study of diagnosis, of the most positive value. The symptoms of every form of medical disease, general and local, are carefully analyzed, and their proper value given them. Much that is doubtful and perplexing in the diagnosis of the more obscure forms of disease, is thus rendered clear and definite, and a rational system of treatment is substituted for an empirical.

ART. XVII.—*A Treatise on the Employment of the Speculum in the Diagnosis and Treatment of Uterine Disease, with three hundred Cases.* By ROBERT LEE, M.D. London: John Churchill, 8vo, pp. 132, 1858.

THIS book, far from proving the necessity of restraining the use of the speculum, reveals a deplorable state of practical sense and medical education among English practitioners. Nothing could have done more harm to the reputation of our brethren abroad than this little book. Every reader, who shall take the trouble to peruse it, must come to the same conclusion; and even Dr. Lee's great example, as recorded in the preliminary remarks, where a woman died eight days after an examination with the speculum, from meningitis spinalis, proves nothing but the gross ignorance and barbarism of the attending physician. If Dr. Lee was possessed of one particle of patriotism, he would never have published this pamphlet. Our judgment of the book in question may be comprised in these few words: *Si tacuisses, philosophus mansisses.*

ART. XVIII.—*An Essay upon the Relation of Bilious and Yellow Fever.* By RICHARD D. ARNOLD, M.D., Professor of the Theory and Practice of Medicine in the Savannah Medical College.

SEVERAL finely executed colored lithographs, representing the varied and characteristic appearances of the liver, in bilious and in yellow fever, give to Dr. Arnold's essay a peculiar interest and value. The plate exhibiting the characteristic appearance of the liver in yellow fever, is strikingly true to nature. We think it better than a similar coloring in the lamented Dr. Blair's book. Dr. Arnold happily compares the color of yellow-fever livers to the peculiar hues of *boxwood*—a color varying from a dingy to a bright yellow.

The *bronze* liver of malignant bilious fever is admirably rendered; also the varied mahogany and other hues that characterize the liver in the more ordinary forms of remittent fever.

As a pupil of the distinguished Dr. Waring, Dr. Arnold was for many years a believer in the identity of yellow and the bilious fevers; but he now regards the former as a distinct and specific malady, while he evidently believes that it is uniformly of domestic origin, so far as he has observed it in the city of Savannah. E. H.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrics and Diseases of Women; prepared for the NEW YORK JOURNAL OF MEDICINE. By E. NOEGGERATH, M.D., Physician to the Female Department of the German (Canal Street) Dispensary of the City of New York.

I.—ANATOMY AND PHYSIOLOGY.

1. *W. T. Savory.—An experimental inquiry into the effect upon the mother of poisoning the fœtus* (June, 1858).—Although the question, as to the possibility of transmitting poisons through the fœtal vessels of the cord to the maternal blood, seemed to be settled in the negative by the experiments of Magendie, many physiologists still believe, that the fœtal blood commingles with the general mass of the mother's blood; it inoculates her system with the qualities of the fœtus; and that, as these qualities are in part derived by the fœtus from its male progenitor, the peculiar constitutional vices of the latter are thereby so engrafted on the system of the female, as to be communicable by her to any offspring she may subsequently have by other males. And as, moreover, the nature of Magendie's experiments appeared to Dr. Savory objectionable, he followed another method, which was crowned with affirmative results. His general plan was as follows: By opening the abdomen and uterus to expose and isolate a living fœtus; then to inject into it, with the least possible violence, some substance capable of ready absorption, and the operation of which is marked by obvious and unmistakable effects; great care being taken that no trace of the substance came into direct contact with the maternal tissues. The fœtus, thus injected, was placed in a condition most favorable for the continuance of the circulation, and symptoms of the operation of the poison upon the mother were carefully noted. The poison Dr. Savory selected was twenty-four grains of strychnia, dissolved in seven drachms of distilled water, by the addition of one drachm of acetic acid. The subjects of his experiments were dogs, cats, and rabbits. Five experiments are reported, from which it seems that proof is no longer wanting, of the direct and rapid transmission of matter from the fœtus to the mother through the blood in the placenta.

2. *G. Schmidt.—Remarks on the origin and practical value of the so-called navel-string souffle* (*Scanzoni's Beiträge z. Geburtskunde, etc.*, B. 3. 1858).—The opinions of the different authors, who have paid attention to this interesting phenomenon, being divided as to its true seat and nature, Dr. Schmidt feels justified in the publication of five instances of

navel-string souffle, perceived before the child was born, out of 500 obstetrical cases, all of which were thoroughly examined with the stethoscope.

Case 1.—The child was born in a state of asphyxia, and could not be revived. The post-mortem was performed by Prof. Virchow, who found a decided hypertrophy of the right ventricle of the heart, insufficiency of the valvula mitralis et tricuspidalis, and a deposition of several red, gelatinous corpuscula on both valves.

Case 2.—When the head of the child was born, the navel-string was found twisted around the neck twice, and so strong, that the vessels of the neck were compressed, in consequence of which, the face had a cyanotic color. The child died after a few short inspirations.

Case 3.—The sounds of the fœtal heart were heard clear and distinctly, immediately before the rupture of the amnion. When the water had been discharged, a prolapsus of the umbilical cord was discovered, upon which the head of the child was pressing with considerable force. Auscultation applied at this moment, discovered not the former sound of the fœtal heart, but instead a souffle, which disappeared as soon as the prolapsed string was removed into the cavity of the womb.

Case 4.—The sounds of the fœtal heart were accompanied by a strong souffle. Still, when the child was born, the navel-string was not twisted round the neck; the child was healthy, and the sounds of his heart found in good order.

Case 5.—Instead of the first sound of the heart a souffle was detected by auscultation. When the head was born, the umbilical cord was found tightened around the neck. The child was asphyxiated, and it was half an hour before it could be declared out of danger.

From an analysis of these cases, Dr. Schmidt comes to the conclusion, that the so-called umbilical souffle may take its origin: *a.* From diseases of the fœtal heart. *b.* From circumvolution of the umbilical cord around the neck of the child. *c.* From other compressions of the navel-string depending upon the position of the child.

In regard to the practical value of the funic-souffle, Dr. Schmidt is of opinion, that its presence, in most cases, indicates danger to the life of the child.

II.—PREGNANCY, LABOR AND PUERPERAL STATE.

1. *Dr. Allen on dystocia, in consequence of perfect ossification of the fatal head* (*New Orleans Medical News and Hospital Gazette*, 1857).—Among the causes which may prevent an easy confinement, the early ossification of the fœtal sutures is rarely met with. Still, at times, this incident alone is sufficient to demand the use of perforators for delivery. An instance of this kind is recorded by the author, where, after a series of strong pains for twelve hours, the head did not move onwards, though there was no hindrance from any part of the pelvis. Neither a fontanelle nor a suture was to be recognized, and perforation was resorted to, which operation, however, was attended with a great many difficulties, because of the unusual density of the

cranial bones. The delivery was at last effected with the aid of the forceps. The examination of the corpse showed that the head was in a condition similar to that found in grown persons, and the bones as hard as stone.

2. *Dr. Clay on an important form of intractable vomitus during the last months of pregnancy* (*The Mialand Quarterly Journ.*, Oct., 1857).—The different remedies usual against obstinate vomiting are very often without the least benefit, because its causes are only imperfectly known. Therefore, Dr. Clay calls the attention of the profession to one of its causes, which he had occasion to observe three times. This is an increased painfulness of the neck and mouth of the uterus, in consequence of inflammatory action. The slightest irritation of these parts, causes the most violent vomiting, which stops as soon as the irritation is removed. Therefore, he recommends such a position of the patient, that the head of the fœtus is prevented from pressing upon the uterine neck, and, if necessary, the application of leeches for subduing the inflammation. This treatment proved perfectly successful in the three cases recorded.

3. *H. Bennet on hemorrhagia during the first months of pregnancy* (*Lancet*, Jan., 1858). The cause of bleeding in the first months of pregnancy, is very often the consequence of chronic inflammation and ulceration of the womb. Therefore, it is necessary to apply the speculum in cases of this nature. If, on the contrary, the cervix uteri is found free from inflammation, and the bleeding goes on unconnected with uterine contractions, it is very probable that a mole or hydatides are present. Hemorrhages, if connected with chronic inflammation during pregnancy, have generally a good effect upon the diseased condition of the womb, in lessening the state of congestion. Dr. Bennet is of opinion, that in all cases of returning catamenia during pregnancy, the uterine orifice is the seat of inflammatory ulcerations, so that the bleeding cannot be properly called a menstrual one. Therefore, a woman who believes herself in the family way, notwithstanding the continuance of her courses, is very likely not so, if, after careful examination, the cervix is found healthy.

4. *D. A. Pagenstecher on lacerations of the vagina during labor* (*Wochenbl. d. Zeitschrift. der k. k. Gesellsch. der Aerzte zu Wien*, 1857, No. 46).—Dr. P. is of opinion, that the vagina is lacerated during parturition, in many instances; an accident which in most instances escapes detection, while the wound unites of itself, during childbed. Three cases are reported, in which the perforations of the vagina were discovered by mere accident.

Case 1.—After an easy forceps operation, a rupture was found running across the anterior wall of the vagina, close by the neck of the uterus, through which several fingers could be introduced, and advanced up to the body of the womb. Four days afterwards, the edges of the wound were scarcely as large as a sixpenny piece, and were found perfectly healed after the first week.

Case 2.—After a forceps operation for contracted pelvis, Dr. P., when endeavoring to remove the afterbirth, detected a laceration of the

vagina, close behind the cervix, through which the fingers could be introduced into the spatium Douglasii, where they touched portions of the intestinal tube. When the placenta had been taken away, the uterus was pulled down into the small pelvis, in order to bring the edges of the wound together. Not the least accident was observed after this injury, and all was healed up in a short time.

5. *Prof. Litzmann on some new contributions to the doctrine of uræmia during and after pregnancy* (*Transactions of the Berlin Obstetrical Society, Monatsschrift f. Geburtsk.*, June, 1858).—In a paper, read before this society, Prof. Litzmann expresses his opinion, that future times would establish the fact that eclampsia ought to be considered as a symptom of uræmia with very few exceptions. Still, eclampsia is not the only form of uræmic intoxication. Other symptoms of this affection are, amaurosis, coma, mania and typhoid fever. The most general cause of uræmia in cases of this kind, is Bright's disease of the kidneys, *i. e.* an exudation of an albuminous and fibrinous fluid into the urinary ducts, in consequence of which the excretion of urea and other ingredients of urine is checked. It most commonly takes its origin during the latter months of pregnancy, owing to a stasis of the venous blood in the kidneys. The urine taken from women thus affected shows a considerable decrease of urea, and very often of lithic acid. It often happens that the progress of the disease, as detected by the microscope, does not correspond with the symptoms during life, and the reaction of the system seems to depend more upon the extension than upon the intensity of the affection. If a considerable portion of both kidneys is affected with the first stage of the disease, the effect upon the constitution of the blood is greater than if a smaller portion is in a more advanced stage. In the former instance, the excretion of urea must be more restricted, than in the latter one. This is exemplified by the history of a case, where, with a seemingly far advanced degeneration of the kidneys, the excretion of urea was not diminished, and consequently, no uræmic symptoms occurred.

The second case reported was one of congestion of the kidneys, in which severe uræmic symptoms set in, while only very slight traces of albumen could be detected in the urine. But a chemical analysis proved a considerable decrease of urea during the several attacks; and when the patient began to recover, a larger quantity of urea could be detected in the urine. The child which was born with a cyanotic tint, died twelve hours after birth. A chemical analysis proved the presence of a considerable quantity of urea in his blood.

6. *Prof. Virchow on puerperal fever, as observed in the Charity-Hospital of Berlin* (*Transactions of the Obstetrical Society of Berlin. Monatsschrift f. Geb.*, June, 1858).—The epidemic observed extended from the fall of 1856 up to the present time, making 18 months altogether. The fever was at its height in both winters, confirming a fact already pointed out by Dr. Virchow in 1847, that the disease is more prevalent in winter than at any other season, thus contrasting with the so-called traumatic fever, which is more prevalent in summer time. In almost every case the post-mortem discovered some localized affection. One

of the most surprising features was the frequent presence of recent endocarditis, with undoubted symptoms of puerperal fever during life. The affection, in most cases, had involved the mitral valve. In some of these it could be stated that particles from the diseased valve had been removed, swept away with the current of blood, and deposited in distant localities, thus obstructing capillaries, and causing local inflammations, phenomena which hitherto have always been called metastatic and pyæmic deposits. The particles from the mitral were recognized in these embolic deposits by treatment with a solution of caustic potassa, by which fresh fibrinous concretions are partially dissolved, while the fragments from the heart underwent no change. In these cases, the uterus was found perfectly healthy, and the symptoms of puerperal fever started exclusively from this affection of the heart. The author met with four cases of this kind, in one of which the sudden death was caused by a malacia of the entire heart. He therefore considers this endocarditis of a puerperal character, and thinks the condition of the heart ought to be more generally considered in cases of so-called metastatic affections, especially if the state of the abdomen does not sufficiently explain either the violence of the disease or the frequency of the pulse.

At the time when the epidemic was at its height, most of the cases were of a peritoneal character, among which the greatest number was free from metastases. The nature of this peritoneal inflammation showed two distinct forms; one was a mere superficial peritonitis with partly plastic, partly purulent exudation; the other, more dangerous, was of a diphtheritic character, the effusion of which spread to the deeper layers of cellular tissue, which afterwards degenerated, thus presenting a mixture of detritus and pus. This is the same diphtheritic process which in so many instances seizes the inner portion of the womb.

In one case the uterus itself was the seat of inflammation, which resulted in gangrene. Of more common occurrence was ovaritis, representing also two different forms, viz., a superficial inflammation, resulting in abscess of one or more follicles, which, by rupturing, gave rise to violent peritonitis; or a diffuse inflammation of the parenchyma, leading to considerable enlargement and malacia of the ovary.

At other times, phlebitis prevailed, generally connected with metastases, which find a natural explanation, if considered as embolics. Inflammation of the lymphatics was scarcely ever followed by metastases, which finds its natural explanation in the fact that the greater number of lymphatics take their course through the lymphatic glands, in which larger particles may be retained, and may produce lymphangoitis, but not vascular thrombosis. These latter affections are generally connected with rupture of the perineum or vagina, or lacerations of the cervix uteri, and are often complicated with gangrenous destructions of the cellular tissue in the pelvis and fossa iliaca.

7. *Dr. Küchenmeister on aphthous fungus as found on the female nipple* (*Wochenbl. d. Zeitschrift. d. kais. königl. Gesellsch. d. Aerzte zu Wien*, June, 1857).—The author, whose authority regarding parasitical formations is so well known, entering upon the question whether the oidium

albicans takes possession of the nipple of the nurse, shows that the same nipple may be the seat of this fungus. He gives a case in which the aphthæ were found on the cracked nipples of a person who had been suckling an aphthous child. He quotes at length a microscopical description of a fungus found by Hoffmann and Leuckart, which had a double form, one having all the characters of an oidium, and the other showing slightly septate threads, which, in their lateral branches, developed sporangiæ (sporidia), out of which the spores proceed. He states his opinion that the structures known as aphthæ exhibit mostly two forms of fungus; one truly forming sporangiæ (sporidia), with spores, and one only forming coccidiæ, the latter exhibiting what was ordinarily termed oidium albicans. This oidium he considers to be only an undeveloped form of the other, which is probably a leptomitus.

8. *Dr. Poitivin on the application of natrum boracicum in metrorrhagia.* (*Rev. de thér.*, 1857, 45).—Two cases of severe hemorrhage after delivery are reported, in which this remedy was applied with great success. He dissolved half an ounce of the salt in four ounces of water, and ordered to take a tablespoonful every hour in one case, and in the other one the same quantity every ten minutes. The doctor observed no evil consequences from the administration of the drug.

III.—PATHOLOGY OF NON-PREGNANT WOMEN.

1. *Dr. Bison on anteversion of the uterus, with endometritis and symptomatic paralysis* (*Gaz. des Hôpit.*, Oct., 1857).—This case, which occurred in Dr. Nonat's ward, shows that diseases of the womb have not only an influence upon the sensitive, but also upon the motory nerves. A lady, 39 years of age, of a healthy constitution, who had menstruated since she was seventeen years old, had been delivered of a healthy child in her twenty-second year, after which she complained of pain in her back, and of fluor albus. These sufferings increased after some years so much that she applied for medical attendance. Lisfranc recognized the presence of endometritis and anteversio uteri in 1842. By antiphlogistic treatment, and application of caustic in substance, great relief was afforded in three months; still a sensation of heaviness in the lower abdomen, fluor albus, and a weakness in the right leg, remained. In 1852 these symptoms increased considerably. Cullerier found hypertrophy of both uterine lips and ulceration of the cervical canal. He applied the ferrum candens and nitrate of silver, after which the sufferings increased and the menses disappeared. Both legs grew weaker, and walking was almost impossible. When Dr. Nonat was consulted, in 1852, she was unable to walk alone; the right leg was perfectly paralyzed, while the left one was constantly trembling. The pains in the abdomen were violent, and the white discharge very copious. During menstruation, the pains and the paralytic state of the lower extremities decreased. The above named morbid condition of the womb was confirmed. By repeated venesections, cupping, and application of the uterine sound, the disease of the womb was so far removed that the paralysis of the legs was also cured, and the patient was enabled to walk perfectly straight.

2. *Dr. Bernard on injections of carbonic acid gas in treatment of diseases of the womb, and their influence upon the system* (*Archiv. générales*, Nov., 1857).—The application of carbonic acid gas in cases of painful uterine disease, as recommended by Drs. Hardy and Simpson, has been tried and found successful by the author in several instances. He records eight cases, four of carcinoma uteri far advanced, and four of a simple congestive but very painful character. In almost all of them the carbonic acid gas had an anæsthetic influence, without producing any alarming symptoms, with the exception of one case. The mode of application is very simple; a bottle, the cork of which is pierced by an elastic canula, is filled with 25 grammes of bi-carbonate of soda, and 20 grammes of bi-sulphate of potash, with a sufficient quantity of water. The development of the gas begins immediately, which is brought up to the diseased portion by means of the elastic tube.

The *first* case proves much in favor of these injections. The patient suffered from carcinomatous ulcerations of the neck, with a fœtid discharge and violent pains. After application of the gas, the pains not only disappeared entirely, but even the ulcers began to look better, and the patient improved considerably in health, so that she was discharged as cured after two months, because only two or three red excrescences could be detected on the neck when she left the hospital.

The *second* case shows an old carcinoma, with violent hemorrhages and deep ulcerations of the neck, while the body of the womb and the neighboring organs were not affected. In this instance, the gas only showed its anæsthetic influence, having no influence upon the disease itself.

In a *third* case of ulcerated carcinoma, the injections at first stopped the discharge, and diminished the pain; but afterwards symptoms of intoxication were remarked, and when these injections were tried again after some time, they had a very bad influence upon the disease, so that their use had to be discontinued.

The *fourth* case is one of far advanced carcinoma, with violent pains in the lower part of the abdomen, which disappeared very rapidly after the first injections. The disease itself was not influenced in its course.

The *fifth* observation is one of inflammatory induration of the neck, with violent pains. The gas had a local quieting influence, but produced such violent symptoms of intoxication, that its application had to be suspended.

In the *sixth* case, which was similar to the former one, the pains disappeared very soon, and the swelling diminished, but signs of intoxication were observed also.

In a *seventh* case, signs of absorption of the gas were observed, but the pains disappeared, while the ulcerations remained unchanged. The patient remained only a short time under treatment.

Eighth case.—Metritis, engorgement of the neck, violent pains, against which a great number of remedies were applied, without the least benefit. They disappeared after the first injections.

The anæsthetic influence of the gas only remains a short time, therefore the injections have to be repeated several times in a day.

The first symptoms of intoxication generally pass over very soon, and are weaker with every following application. Only in one instance did the injections have to be discontinued.

It is a remarkable fact, that they were only remarked with those patients who suffered from inflammatory swellings of the neck, never in those affected with cancer. In two cases the disease itself was diminished, once in ulceration of the neck, once in carcinomatous ulceration.

3. *Dr. Scanzoni on a case of death occurring after injection of carbonic gas into the cavity of the uterus* (*Scanzoni Beitr. zur Geburtsk.* B. 3. *Wurzburg*, 1858).—The carbonic acid gas has been applied of late as a local means more frequently, and Dr. Scanzoni himself has proposed its use for inducing premature confinement. The following case, therefore, is of no little interest, and will caution practitioners in the use of a remedy which hitherto has been considered void of danger when locally applied. Dr. S. was called in consultation to see a lady who suffered from an enormous hypertrophy, with prolapsus of the cervix uteri. He therefore recommended the removal of the diseased portions by an operation. The attending physician fully agreed with this proposition, but thought it a good plan to apply a remedy, which, in his opinion, had an influence upon the contraction of the vascular system, in order to lessen the chances of excessive hemorrhage, after the amputation of the cervix. He therefore proposed to introduce the carbonic gas into the cervix uteri for several days. Dr. Scanzoni, though not believing that this remedy would have any considerable influence upon the quantity of blood to be lost after the operation, consented to its application more out of regard to the attending physician. A dried pig's bladder, to which a canula was attached, was filled with the gas, and the mouthpiece introduced into the gaping orifice, and the bladder gently pressed. But scarcely two or three cubic inches had entered the cervix when the patient screamed out, saying, "I feel air entering my stomach, head, throat." These, her last words, were followed immediately by a violent, general tetanus, respiration became very difficult and rattling, the pulse weak and frequent, and notwithstanding everything was done by several physicians present to save her life, she died 1¾ hours after the application of the gas.

The post-mortem, two days after death, revealed no pathological condition whatever, besides a far advanced œdema of the lungs. But a pregnancy of four months was discovered, which was not detected during life on account of certain peculiarities of the uterus, for the walls of the uterus were not much thicker than a piece of card-paper, so that it looked at first like a large cyst, filled with water. The hypertrophy generally connected with pregnancy seemed to be restricted to the uterine neck in this instance, and the distance between the external and internal orifice of the womb measured 3½ inches. The ovum was found in a perfect condition. No traces of peritonitis were found, and Dr. Scanzoni is of opinion that the gas must have entered one of the larger uterine vessels.

4. *Dr. E. Rigby describes in the Med. Times and Gaz., of Jan.* 30, 1858, *a peculiar condition of the womb, which he calls the "squatting uterus,"*

where the body of the uterus is too weak to sustain the fundus and the pressure of the intestines upon the latter; it thenceforth must yield in every direction, so that the fundus approaches the orifice. The following symptoms are connected with the disease: pain behind the symphysis pubis, increased by the upright position, extension to the bladder or rectum; the menses are generally very copious. The uterus, upon examination, is found enlarged, of a spherical shape, very soft, while the cervix feels hard, and is short and painful. The probe passes the orifice easily, while its further advance is generally connected with pain; the cavity is found enlarged, and after the fundus has been elevated to its full extent, the probe measures generally 3″ at the external orifice, even in women who have never been pregnant. The patient feels immediate relief as soon as the fundus has been brought to its right position by the sound. The treatment of this disease consists chiefly in the application of general and local tonics, and rest of the body.

5. *Dr. Bonorden on prolapsus uteri and its treatment with internal remedies* (*Preuss. Ver. Zeit.* 2, 1858).—The most common cause of prolapsus being hypertrophy of the womb and relaxation of the round and lateral ligaments, the author tries to remove these morbid conditions by the following treatment: the patient begins to take every day the following powders: R secal. cornut. gr. iii., gummi galbani, gr. x., decreasing the quantity as the disease lessens; at the same time a mistura oleoso-balsamica is rubbed over the mons veneris, the thighs, and vulva several times a day. Two cases are reported in which the treatment proved successful.

6. *Dr. H. Savage.—Short notes on the history and applications of the perineo-plastic operation* (*Lancet*, June, 1858).—After a short historical analysis of the various surgical plans for treating prolapsus uteri (*Marshall Hall, Dieffenbach, Ecory Kennedy, Phillips, Desgranges, Fricke, Geddings, Brown*), he proposes his own method, which is a slight but important modification of Geddings's operation, and which was applied successfully in eleven cases. Having, by pinching up more or less of the flaccid vulva, carefully ascertained how much integument may be removed, a flap of suitable size is marked off by a sharp scalpel, and then dissected away, commencing with the skin, and ending with the vagina; the *entire thickness* of which, however, is taken away as far as the perineal fascia, after which the raw surfaces are united by quilled suture, and five or six points of interrupted suture, which are removed on the sixth day.

7. *W. Tyler Smith on a case of complete inversion of the uterus of nearly twelve years' duration, successfully treated* (*Lancet*, June, 1858).—The subject of the present case was delivered, at the age of eighteen, of a first child, and inversion occurred at that time, but was not suspected by her attendant. All attempts at replacing the uterus failed. The patient was sent to the author of the paper, in September, 1856, and symptoms of anæmia existed in the most marked degree. She was subject to epileptiform convulsions and frequent faintings. On examination, the uterus was found to be completely inverted, the neck of the

uterus and the os uteri being very small and rigid; the author determined to attempt its reduction by continuous pressure, with the intention of dilating or developing the os and cervix uteri. With this object, the right hand was passed into the vagina, night and morning, and the uterus squeezed and moulded for about ten minutes at a time. Chloroform, which had been found so useful in cases of inversion of shorter standing, was not used, because of the feeble state of the heart and circulation, and the comparative absence of pain. In the intervals between these manipulations, the vagina was distended, and firm pressure exerted upwards by a large air pessary. These means gradually dilated the os uteri to such an extent as to allow of the partial return of the uterus, and on the eighth day from the commencement complete reinversion took place. The subsequent recovery of. the patient was perfect. She has since menstruated regularly, and is in excellent health.

8. *F. Holst.—Remarks on the treatment of flexions of the uterus* (*Scanzoni's Beiträge, z. Geburtskunde, etc.*, B. 3, 1858).—After a short analysis of the causes, symptoms, and pathology of uterine flexions (ante and retro-flexion) the author proceeds to explain his mode of treating these affections. The treatment must be a general and a local one. In the first cases which came under Dr. Holst's observation, he applied the self-retaining instrument (redresseur) of *Kiwisch-Mayer.*

The introduction of the instrument and the reposition of the womb was never connected with any difficulties. But most of the women under treatment could not endure the presence of the instrument for any length of time. Violent pains, and spasmodic and hysterical disorders followed every protracted application. He therefore diminished the size and elasticity of the two upper arms, by which plan he succeeded so well, that most women could bear it sufficiently in the uterus. But, although he applied it for three or four hours daily, during several months, he could not record one single case of recovery, notwithstanding the simultaneous application of proper internal remedies. He therefore entirely changed his former plan of treating these malpositions, and with far better results. Above all, a course of general treatment was ordered, with a view to strengthen the system and relaxed state of the womb. The remedies used were cold and sea bathing, iron, ergot, and injections of cold water, by means of a strong douche. By making use of these remedies for many months, and even years, the patients became strong and healthy, menstruation regular, without pains, and the fluor albus stopped entirely. Of fourteen patients who were treated in this manner, all derived great benefit, while in two of them also, the local disease (one ante-flexion, one retro-flexion), were entirely cured.

9. *Dr. Ladreit de la Charrière, on the cysts which develop in the walls of the vagina* (*Archiv. génér.*, May, 1858.)—After a short analysis of the literature touching this subject, and a minute anatomical description of the vagina, which presents nothing new, Dr. Ladreit enters upon the consideration of these cysts which are imbedded in the deeper portions of the vagina. They are always situated one inch at least

beyond the hymen, and are considered by most authors to originate from the vaginal follicles, while the author believes the cellular tissue of the vagina to be very often the seat of their development. In other instances they may commence between the muscular layers of the rectum and vagina, or between the bladder and vagina. By microscopical examination he was enabled to prove the absence of an epithelial layer in those more remote vaginal cysts, which is an essential portion of the glands and of those cysts, which are situated in the neighborhood of the vaginal orifice. They are composed of cellular, fibro-cellular, fibro-plastic, and vascular tissue. They result from an inflammation, the deposits of which are not transformed into pus, but into a bursa mucosa. The most favored place of development is the anterior wall of the vagina; and in by far the greatest number of cases parturition, or sexual intercourse had preceded their origin.

As long as the cysts are small, and situated far above the entrance of the vagina, they scarcely give any trouble, and their presence is not noticed by the patients. Some have been found as large as a hen's egg; they are mostly of an ovoid shape, with smooth surface, those originating from one of the vaginal glands have a pedicle, and are movable, and present themselves at times near the orifice of the vulva. Unless they are of considerable size, they do not effect any inconvenience whatever, while at times they give rise to a distressing sensation of dragging, to fluor albus, or dysuria; they even, in some instances, have presented an obstacle to parturition. The liquid contained in these cysts is of a yellow or brown color, and generally contains granular globules, which are composed of simple granulations.

The outer layer of these cysts consists of the mucous membrane of the vagina, which is very much distended and discolored. The inner layer is composed of cellular and elastic tissue, with a vascular stratum, intermixed with a few muscular elements.

These tumors have been mistaken for prolapsus uteri, hernia vesicæ, or recti, tumors of the ovaries, etc. Still, by a minute examination, it is not difficult to come to a right diagnosis.

The treatment of these cysts is the same as that applied in hydrocele, be it by excision or injection of a stimulating liquid.

The article is concluded with the history of five cases.

Report on the Progress of Infantile Pathology and Therapeutics; prepared for the NEW YORK JOURNAL OF MEDICINE. By A. JACOBI, M. D., Physician to the Children's Department of the (Canal street) German Dispensary of the city of New York.

I.—DIGESTIVE ORGANS.

1. *Retropharyngeal abscess.*—The very best essay on this important disease of the infantile age, as yet published, is from Dr. Bokai (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p. 183). The main points of his valuable expositions are the following facts: Retropharyngeal abscesses may be classified under three heads. Some

are developed idiopathically, from an inflammation of the pharynx, and the surrounding cellular tissue, the inflammation taking its origin from either a catarrhal affection, or a metastatic process, under the influence of an acute exanthem, typhus, pyæmia, etc. Another class are secondary, being produced by the suppuration of inflamed lymphatic glands of the neck. The third class owe their origin to the suppuration of cervical vertebræ, or their ligaments. The first class occurs in the majority of cases before, or at the time of the first dentition, this period of life being most subject to idiopathic catarrhal inflammations. The second class are more frequently found about the time of the second dentition, which is most favorable to inflammations of the lymphatic glands, as produced by scrofula. The third class belong, in their majority, to the same age; inflammation, tuberculous as well as traumatic, being uncommon at an earlier period. The prognosis in cases of the first class is generally favorable, unless the incision of the abscess be neglected; with the only exception of metastatic abscesses, which are but symptoms of a more or less grave affection of the whole system; in these cases everything depends on the possibility or impossibility of a cure of the morbid crasis of the blood. The cases of the second class are not unfavorable, although they be only secondary, because there is always a hope that a rational treatment of the general disease will be successful. The prognosis of the third class is most unfavorable; for there is only a momentary relief after the abscess is opened, either artificially or spontaneously. The treatment is to be modified according to individual cases. Idiopathic abscesses, when in their beginning, require a rational antiphlogistic local application of cold, either externally or by gargling, with, or without alum; local application of alum or nitrate of silver, leeches, scarifications of the pharynx. When the inflammation cannot be kept from further development, warm poultices will be found preferable; they may be left away, and warm emollient gargles given instead, where congestive cerebral symptoms prohibit their further application. Internal treatment is not of much use, except in moderating the fever, cerebral symptoms, etc., especially the tartar-emetic is not deserving of its general warm recommendations. Where the symptoms are grave, and suffocation imminent, undoubtedly the safest and quickest remedy is incision, after which the abscess is to be washed out by gargling or syringing. Metastatic abscesses require incision only where the symptoms are very grave. After it has been made, water would not be sufficient for cleansing and healing the wounds, but stimulants, astringents, and roborants are always required, such as chloret. calc., alum, nitr. arg., tann. ac.; also, the internal treatment has to be modified by the general morbid affection, and bark, mineral acids, etc., will often be found necessary. Secondary abscesses of the second class above mentioned, require the same local treatment as idiopathic ones. Where an external abscess originating from glandular inflammation is diagnosticated, it has to be incised from outside, in order to prevent, if possible, the formation of a retropharyngeal abscess. At all events the treatment after the incision of a retropharyngeal abscess of this class will take the more time and care, the graver the

general glandular disease, and the severer the dyscrasic dissolution of the blood. Iod potassii., iod. ferri, and cod-liver oil will often be required. The cases of the third class, offer a large number of indications, but are much less hopeful. Quiet position, application of cold, leeches, ointments of mercury and iodine, calomel, nitr. potassæ, tart. em., iod. potassii, iod. ferr., are indicated, and have been used and abused. The incision ought to be made as late as possible.

2. *Catarrh and follicular ulceration of the intestinum crassum.*—Prof. Clar, of Gratz, publishes in the *Jahrb. für Kind. und phys. Erz.*, 1858, iii. and iv. several essays on the pathology and therapeutics of some of the most important diseases of the infantile intestinum crassum, of which the following is an extract: Catarrhal diarrhœa, during dentition, especially where some cerebral or pulmonic affections are present, ought not to be suppressed as long as a derivation is desirable, and the child does not suffer from impaired nutrition. If such is the case, or a catarrhal diarrhœa is continuing, without symptoms of difficult dentition, injections of salep, starch, alum, tannic acid, with a small quantity of opium, are indicated, together with the internal use of ipecac., tinct. cat., ratanh. Injections, sometimes emollient, sometimes astringent, have also to be employed in the protracted catarrhal affections of the int. crassum, in anæmic, scrofulous, rhachitic children; most successful are injections of solutions of tannic acid or nitrate of silver. In general it may be stated, that Prof. Clar lays more stress on the importance of injections in infantile diseases than has ever been done. His desire to publish his experience, and to recommend such a simple mode of administering medicaments in diseases of the lower intestines cannot be too much praised. Children with follicular ulceration range from some months to some years of age; they are anæmic and atrophied, their hands and feet infiltrated with serum, as well as their cerebrum, the repeated œdema of which is a usual cause of death. There is bronchial and pulmonary catarrh, sometimes the lungs are œdematous, but in the majority of cases, full of air, and bloodless; the liver is somewhat enlarged, filled with serous blood, the spleen pale and small, the mucous membrane of the stomach and intestines covered with a tough and viscid mucus, and in some parts of a greyish color; on the mucous membrane there are the peculiar solitary and bluish spots (almost similar to pale sugillations), which show, in their centres, small ulcerations, with the follicle somewhat excoriated, and of a looser tissue, sometimes even without a follicle being present at all. The progress of this disease is, generally, this: The first cause has been bad food, and insufficient care; pulmonary and bronchial catarrhs, of great obstinacy, impaired the sanguification; the catarrh and follicular ulceration of the int. crassum accelerated the consumption of blood and strength, and finally, the cerebral or pulmonary œdema, or both, resulting from the great exhaustion, produced death by means of cerebral or pulmonary paralysis.

3. *Atrophia enterica.*—Infantile marasmus is the consequence of a great number of organic diseases. The one consequent on chronic intestinal complaints is distinguished by Dr. Ignaz Lederer (*Wiener Medicinische*

Wochenschrift, 1858, No. 16), from the one following on tubercular degenerations of the mesenteric glands, etc. The causes of enteric atrophia is either a simple chronic internal catarrh, or follicular catarrh, or enteritis choleriformis (cholera infantum), or, in a very few cases, dysentery, of which infants in early age usually die in an early stage. Extreme emaciation, diarrhœa, pain and sleeplessness, are the most common symptoms, besides most craving thirst and hunger. These are of a diagnostic importance, being not found in the other kinds of marasmus; nevertheless the stomach and intestines are not sufficiently powerful to digest. Absence of fever is characteristic, so much so, that feverishness is usually a prodrome to cerebral or other complications, of which the most common are: cerebral or pulmonary stasis, otorrhœa, tumefactions of the glands, abscesses, furuncles, and pertussis. Milk is not always tolerated, and is seldom so in large cities. Lederer then prefers to give beef-tea, without spice, but with some sugar; sometimes, where diarrhœa is present, with rice water. Veal soup generally causes or aggravates diarrhœa.

4. *Colitis crouposa.*—Prof. Clar (*Jahrb. f. Kind. u. phys. Erz.*, 1858, iv. p. 220), gives the following particulars. Colitis crouposa must be suspected wherever a young and feeble infant is suffering from a diarrhœa, which shows neither the catarrhal nor the dyspeptic characters. The evacuations are mixed with small points and stripes of blood and exudated matter, even pseudo-membranes; the pain is manifestly following the direction of the colon; urine is easily passed, although the symptoms may be similar to those of cholera neonatorum. Moreover, it is to be kept in mind, that a genuine dysenteric process, producing similar excretions, occurs but very seldom, if at all, in so early a period of life. Whenever the colitis is idiopathic, and not the consequence of pyæmia, local treatment appears to be most successful. Injections of cold water, or emollient liquids, with or without laudanum, and in severe cases, from a quarter of to a grain of nitrate of silver, dissolved in two or three ounces of water, form the better and principal part of the medical treatment.

5. *Dysentery.*—Prof. Clar (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p. 223), describes three different classes of dysentery, of which one may be, in some cases, only a preceding or consecutive stage of others. There is, 1st, a light erythematous dysentery; 2d, a graver inflammatory affection of the mucous membrane; and 3d, a grave inflammation of the mucous membrane with simultaneous exudation in the sub-mucous cellular tissue, and sometimes inflammation of the muscular tissue and serous membrane. Dysentery, although often occurring epidemically, is rarely observed in the first year of life. Its characteristics are a peculiar excretion of a viscid mucus and yellowish, reddish, bloody, chocolate-colored, even black and gangrenous, fœtid masses; tenesmus; sensibility of the rectum; high color of the orificium ani; collapse; a peculiar expression of the physiognomy, corresponding with the grave abdominal affection, and, in a large number of cases, pain following the course of the colon ascendens, transversum and descendens. The erythematous form of dysentery is rarely observed before, usually after, the third year of life; its symptoms are less severe, but

not a few cases occur which lead to rapid death, although the progress of the disease seems slight and mild. Medicaments, introduced by both stomach and rectum, must vary according to the individual case. Emollients and sedatives, sometimes narcotics, will do good in many mild cases. Injections of nitrate of silver, injections of cold water, or of both of them alternately, cold applied to the external surface of the abdomen, sometimes warm poultices, will be found to act successfully. Prof. Clar does not seem to think much of calomel, but very much of antacids. In no disease is it more necessary to individualize, than in dysenteric affections; for now the inflammatory, then the septic character will be predominant; sometimes mild dysentery will be accompanied by the most excruciating attacks of colic; in midsummer, congestion, even metastatic inflammation of the liver, will go along with it; and again, rheumatic affections of the peritoneum may aggravate the number of even slight symptoms of the disease.

6. *Paralysis of the sphincter of the rectum.*—Prof. Clar remarks that (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p. 228) temporary or persistent paralysis of the sphincter is usually observed in children of from eight to twelve years of age, and occurs after exhausting diarrhœa of long standing, after long and continued irritation by worms, and sometimes without any manifest cause. The patients drop their excrements, solid or liquid, while walking. The orificium ani shows a large opening. Cold and copious injections ought to be given and often repeated, and after an evacuation has been effected, a small injection of a solution of tann. ac. in water, with some tinct. nuc. vom. The same treatment may be resorted to in paralysis of the sphincter, complicated with prolapsus recti, after reposition has been performed.

7. *Constipation.*—It cannot too often be stated, that there is nothing more dangerous to children than repeated laxatives. They operate once, but only to leave the bowels more subject to constipation than ever. Prof. Clar (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p 230) gives two indications, which are to be fulfilled by stimulation—1st, of the intestinal mucous membrane; 2d, of the action of the intestinal muscular fibres. The first is effected by injections of soap, sulph. magn., sulph. sod., chloret. sodii, dissolved in water; where any contra-indication forbids the injection of salts, injections of sugar and water will be found useful. In order to stimulate the muscular fibres of the intest. crassum, he recommends dec. tarax., dec. gramin., with an addition of tinct. colocynth, tinct. rhei aq., tinct. rhei vin., tinct. aloes, or a mild inf. rad. jalap. or inf. fol. senn. [Wherever, for the last few years, I have met with obstinate constipation in infants, I generally succeeded in giving speedy and full relief by ordering some sweet sugar-water to be taken every day, besides the breast. I am satisfied, that the chief cause of constipation in nurslings is the insufficiency of sugar in the breast-milk, the proportions of which are, naturally, not the same with every mother. Wherever caseine exceeds the proportion of the other parts of the milk, it becomes indigestible by a relative want of lactic acid in the contents of the stomach and intestines. A. J.]

II.—RESPIRATORY ORGANS.

1. *Tracheotomy.*—Dr. H. W. Fuller publishes in the *Medico-chirurgical Transactions*, vol. lx., 1857, seven cases of tracheotomy, performed for croup, three of which terminated successfully. He then enumerates 23 operations of tracheotomy performed in England, including his own, nine of which were successful. (Since the appearance of Dr. Fuller's paper, five additional cases have been published, of which three had a favorable result.) There is no doubt, then, that this operation is productive of a great saving of life. But the author is opposed to its early performance, as recommended by the French surgeons, and disapproves of its performance where the patient has been out of health prior to his attack of croup; if his illness has been preceded by pneumonia or severe bronchitis; if he is suffering from any exanthematic or other disorder; and finally, lays particular stress on the fact, that the operation itself barely admits air and does not remove the disease, which is to be treated as before the operation.—*The Brit. and For. Med.-chir. Rev.*, July, 1858. N. Y. ed., p. 80.

2. *Croup cured by cauterization of the larynx, performed by means of catheterism* (*Gaz. des Hôp.* 1858, No. 80).—Catheterism of the larynx is, in France, performed by Dr. Loiseau. A successful case of his is communicated by Trousseau, who says, that he remembers from his own practice only three cases of genuine croup getting well without tracheotomy, and that, without this operation, the chance of recovery has been that of 1 to 100. The first cauterization was performed by a solution of nitrate of silver, the second by a saturated solution of tannic acid, which Dr. Loiseau thinks to be greatly preferable. Alum and tannic acid, powdered, were blown besides into the pharynx and the nasal cavities.

3. *Instillation of chlorate of soda into the trachea* (*L'Union Méd.* No. 82, *Gaz. des Hôp.* No. 68).—E. Barthez has come, by experiments, to the conclusion, that the local application of a solution of chlorate of soda is more effective in macerating pseudo-membranes, than chlorate of potash. He therefore ordered instillations into the trachea of chlorate of soda gr. j. to iv., and water gr. xxx., after tracheotomy had been performed and the pseudo-membranes were known to spread through trachea and bronchi, and had them repeated every quarter of an hour. Before he made these applications, almost every child died after tracheotomy, because the pseudo-membranes could not be removed from below the canula. Afterwards but very few died. After each instillation, a severe cough used to set in, which always brought up a part of the solution, and some macerated pieces of pseudo-membranes. When he instilled water instead of his solution, the same cough ensued, but nothing but the water was thrown out. [It is remarkable indeed, that these results obtained in the same epidemic, in which by far the greater number of patients died after the operation without succeeding instillations. Therefore the remarks of Mr. Seé, in the session of March 24th, of the Société Médicale des Hôpitaux (*L'Un. Méd.*, No. 82, p. 328) are not to the point, when he reminds Dr. Barthez of the fact, that the mortality changes with the year and the genius epidemicus.

A. J.]

III.—NERVOUS SYSTEM.

1. *Mental alienation* (*Bull. Gén. de Thér. Méd. et Chir.*, 1858, liv. p. 556). Brierre de Boismont made the following remarks in the "Institut." Mania, or rather "perversion of instincts with exaltation," is most frequent in young patients. Of 30 cases, the antecedent history of which could be learned, there was in 18 an hereditary disposition. The parents, besides attacks of insanity, were of an extremely sensitive and eccentric character. The children born of them were sometimes of an extremely melancholy, sometimes of a highly gay turn of mind, always changing in their disposition. In the 42 patients observed and recorded by Brierre de Boismont, insanity became manifest towards puberty. The influence of these hereditary transmissions appears to be almost unknown to educators; the author declares himself satisfied, that in many cases insanity is the consequence of this ignorance. The prognosis is unfavorable. Nearly half of the number of patients were registered as being cured, sometime or other, but there were a number of relapses, changes of character and temperament in such a degree, as to disable the patients to take a position in life and follow a business.

2. *Tartar emetic in chorea* (*L'Union Méd*, 1858, Nos. 76, 77, 78; *Gaz. des Hôp.*, No. 80).—Roger publishes 12 cases of chorea treated after the manner of Gillette, who recommends the following treatment. He gives tartar emetic in nothing but sugar-water, and to children of from 7 to 14 years of age, in nearly equal doses. The first day, 20 centigr. of tartar emetic are given in 100 grammes of sugar-water; of this solution the patient will take a spoonful every hour, until severe vomiting or diarrhœa will ensue. It is better tolerated on the second day, when 40 centigr. are given, and on the third, when 60 centigr. are taken. Meanwhile the symptoms of chorea have become slight, and the pulse has diminished in number: at all events, medication is stopped for some days; if it has to be repeated, the doses are of 25, 50, and 75 centigr. A third term, instituted after the same principle, would require doses of 30, 60, and 90 centigr. of tartar emetic in 100 grammes of sugar-water. Of Roger's twelve cases nine recovered rapidly, two felt only short ameliorations, in one the treatment failed completely.—A case of a young man of 18 years of age, in whom tartar emetic failed to effect a cure, is reported in *Gaz. des Hôp.*, No. 74.

3. *Dispersed congenital sclerosis cerebri* (*Gaz. des Hôp.*, 1858, No. 74).—Dr. Legroux reported in the *Société Médicale des Hôpitaux* the following case: A woman, whose eight children had been still-born, gave birth to a ninth, who appeared to be of good health. On the fourth day, the child was found dead in the arms of the mother. The post-mortem examination gave the following results: The cerebral membranes were entirely normal; so was the cerebral substance in its greater part. But on a certain number of points it looked somewhat greyish, and contained about ten small and hard tumors, of 0.01 centim. in diameter, which were dispersed in the cerebral substance, and could not be separated therefrom by enucleation. Under the microscope, they were shown to consist of fibrous tissue, which is never found in a normal cerebrum, of amorphous granular matter, and of a special alteration of the peculiar nervous tissue. The heart was filled with black and vis-

cid blood. Within its texture, especially in the tendinous columns of the left ventricle, there were small tumors of a yellowish white color, looking very much like the cerebral tumors. The lungs were found to be pressed towards the vertebral column, and to be of a black color, with the exception only of the anterior quarter of the left lung, which was of the usual pink color, crepitated and contained air.

4. *Spina bifida.*—A case of spina bifida in a new-born child came under the observation of Dr. W. A. Green (*South. Med. and Surg. Journ.*, July, 1858.) This deformity is rarely uncomplicated, but the complications in this case are somewhat interesting. There were "two appendages to the sac, resembling the mammæ of women; a large hernia between the umbilicus and the symphysis; some small openings through which the urine was continually trickling, but which could not be followed up by the probe; the testicles, 'perfectly formed, were hanging pendent from the middle of the symphysis pubis;' there was no penis, the anus was complete and perforate at the extreme anterior portion of the perineum, next to the symphysis; at the point of the os coccygis was another anus, which proved to be a cul-de-sac."

IV.—UROPOIETIC ORGANS.

Congenital extroversion of the bladder usually occurs in male infants, combined in the majority of cases, with fissure of the urethra on the dorsal surface of the penis. Mr. Curling (*London Lancet*, Am. ed., Aug., 1858, p. 141) publishes a case of this malformation occurring in a female infant. There was a defect of the symphysis pubis, and an absence of the anterior commissure of the labia and clitoris. An opening was present in what appeared to be the mucous membrane of the anterior wall of the vagina, which might be either the meatus urinarius, or the entrance of the uterus. Two smaller openings were present, one on either side of this, which might be either the seminal ducts, or else the fallopian tubes. A slight prominence on either side of the supposed vagina represented, to some extent, the nymphæ. There was no scrotum nor testes.

V.—SKIN AND SENSORY ORGANS.

1. *Hemeralopia cured by azotic vapors* (*L'Union Méd.*, 1858, No. 78).—A boy of ten years of age suffered from hemeralopia, without any manifest cause. No rational indication being present, Deval tried a remedy much recommended by Dupont, and much used amongst the people; he exposed the eyes twice a day, for ten or fifteen minutes each time, to the evaporations of a boiling cow liver. The child got well in a few days (*Dupont mém. sur la goutte sereine nocturne épidémique*). The same remedy is much used by the Chinese (*Dictionnaire de l'Industrie*, Paris, 1795, tom. iv.).

2. *Sclerema in new-born children* (*Bull. de thér.* 15 June, 1858).—Dr. Legroux reports two cases of sclerema neonatorum, which was speedily removed, in the course of some days, by kneading of the body ("massage"), passive motions of the muscles and artificial respiration.

VI.—DYSCRASIC DISEASES.

Infantile Syphilis.—The main points of a lecture, published by Langston Parker, in the *London Lancet*, Am. ed., August, 1858, p. 90, are the following: A father having symptoms of constitutional syphilis at the time of marriage, or at periods more or less remote before it, may procreate a diseased infant, and the mother may never exhibit any symptoms of disease. The explanation of these cases appears to be, that the ovule is impregnated with diseased semen, and its product is consequently diseased. The chances are in favor of the child escaping, if the outbreak of disease has been very violent; *i. e.* if the skin has been loaded with eruption, or again, if the patient have been submitted to a prolonged and energetic treatment. The mother sometimes retains her immunity, but in a number of cases does not; in such cases, the mother derives her disease from the fœtus, a proof whereof is the fact, that the symptoms of syphilis in the mother very frequently disappear after abortion or delivery, even without treatment. Some even assert the mother to get diseased, sometimes, from the seminal fluid alone. The mother may be the source of disease to her fœtus, or infant, in four ways: 1, she may be diseased before conception; 2, she may become diseased after she has conceived; 3, she may disease her infant in its passage through the vagina, or 4, after birth. Where the father impregnates the fœtus with diseased semen, the infant, having been developed in the womb of a healthy female, will usually be cured; a cure is probable also in an infant, whose parents were both healthy before its birth, but whose mother was diseased afterwards, and communicated the disease to her offspring. Where the infant is conceived and developed in the womb of a mother diseased before conception, the prognosis is most unfavorable.

EDITORIAL.

The Academy of Medicine.—This association of the medical profession in our city is making commendable advances in fulfillment of the noble objects of its original organization. Its well-adjusted machinery of *Sections* is working admirably, and the stated meetings of the Academy are steadily increasing in practical importance and interest. In addition to the continued presentation and discussion of such practical papers as that on Prolapsus of the Funis, by Dr. Thomas; Dr. Dalton's, on the Anatomy of the Placenta, and Dr. Bacon's, on Yellow Fever (which we publish in this number of the Journal), the discussions on Puerperal Fever, the Anatomy and Pathology of the Prostate Gland, and a variety of similar themes engross and overrun the time of each session.

The Academy should occupy a position and earn a reputation second to no other medical body in the world; and with a continuation in its present career, its discussions and transactions may soon fully equal those of the Royal Medico-Chirurgical Society, or the French Academy.

The revision of the Constitution and By-Laws, now in progress, will, we trust, remove every obstacle to the exclusive occupation of the time of the stated meetings with strictly scientific discussions. The noble

animus and zeal of the present venerable President, Dr. Batchelder, have done much to promote the interests and to perfect the present improved organization of the Academy. The several *Sections* are now, by their efficient labors, bestowing upon their originator honors even higher than those conferred by presiding over their combined deliberations.

In his inaugural address before the Academy, Dr. Batchelder very happily referred to the practical working of the *Sections*, and also pointed out the duties, influence, and special improvements which the interests of the profession in our city now demand of this body, particularly specifying the necessity of providing a suitable hall and rooms for the stated sessions of the Academy and its several sections. To this very important recommendation, so strongly urged by the present worthy President, and by his predecessor, Prof. Parker, we desire to add our earnest recommendation that a plan be immediately perfected for the founding of a great central medical library and reading-room, which will not only render such a local habitation for the Academy a *necessity*, but become the means of effectually perpetuating its organization as a scientific association, while it provides essential requisites for elevating and cementing the entire profession in the metropolis of our country.

The common interests of our profession, and of science, demand much of the New York Academy of Medicine. In the language of the venerable President, in his excellent inaugural, "the Academy located in this city and State involves the reputation and character of the profession here and throughout the commonwealth. Much is expected of it, and shall that expectation be disappointed? Belonging to this profession, and unlike any other institution in the land, we should spare no pains to make it what it should be."

Nursery and Child's Hospital.—The new building of the Nursery and Child's Hospital (Fifty-first street, near Third avenue) was inaugurated May 22d, with appropriate ceremonies. From the address of Dr. Delafield, on the occasion, we make the following extracts in regard to this institution:

"The history of the Child's Nursery and Hospital is brief, as its existence has been short. When, on the 22d of June, 1857, the corner stone of this building was laid, in an address delivered by a gentleman who has been unceasing in his efforts in favor of the institution, a touching anecdote was told, which showed the origin of the first thought to which it owed its existence. The story of the neglect and wretchedness of one poor infant, whose mother had been forced to take to her breast the child of another that she might gain a livelihood—the kindness and benevolence of an excellent woman in heart and feeling, although not in name, a true 'Sister of Charity,' exerted towards this infant, which rescued it from utter destitution and misery;—this story, told to one of those who would be among you on this occasion if she were not herself on the bed of sickness, awakened a feeling of active benevolence which has unceasingly urged her on, with the excellent ladies, her associates, until they this day reap the reward of their ef-

forts in the completion of this ample and excellent building, and its dedication to the objects of its erection. On the 1st of March, 1854, the 'nursery for children of poor women' was organized, and soon received its charter from the Legislature. In a few weeks a building was provided for it, and opened on the 1st of May following, and so rapidly was it filled, that larger accommodations became almost immediately necessary.

"The first thought was to form an asylum for the children of wet-nurses, or those who, from any other cause, were deprived of the care of a mother, and for the daily charge of those who were obliged to labor away from their own homes to gain a livelihood. But these children often came into the Nursery already suffering under disease, and frequently of the most severe and dangerous character; or, while in the building, obeyed the laws of infancy, and became the subjects of disease. It at once became evident that the sick must be separated from the well; that physicians and nurses must take them in charge; and that arrangements suited to their condition must be made entirely different from those required by the strong and healthy. The necessity of a 'Child's Hospital,' then, became apparent, and this feature in the new charity soon became so prominent, that it was determined to make it a principal object. Accordingly, on application to the Legislature on the 4th of March, 1857, an act was passed changing the name of the institution to the 'Nursery and Child's Hospital,' and this name it now bears." Interesting and appropriate addresses were also made by Erastus Brooks, Esq., and Dr. Geo. T. Elliot, jr.

The New Island Hospital.—This hospital is to be erected on the site of the building recently burned on Blackwell's Island. From the address of Washington Smith, Esq., President of the Board of Governors, on the occasion of laying the corner stone, July 21, we gather the following particulars in regard to this building:

"The building is to be three and a half stories high, with a steep roof, by which means there is a gain, at a small expense, of a full hospital story, sixteen feet high, lighted by windows between the cornice and dormers, above the cornice. The basement arrangements appear to be complete. The height of ceilings of first and second stories is fourteen feet, third story sixteen feet.

"On each story of each wing there will be in the centre building three wards, each capable of containing twenty patients, and two wards in the wings or transverse ends, each capable of containing thirty-two or twenty-four patients, as may be decided upon; each ward to be provided with a single bedroom for particular cases; water-closets to be separated by wells of skylights from the building proper. There will be two principal stairways and two hoistways for patients. Bells and speaking-tubes will be carried from each ward to the room of the medical staff in the third story of the centre building, and a speaking-tube from the third story of the main building to the office and bedroom of the resident physician. The number of patients that can be accommodated without inconvenience will be as follows:

Four wards in basement, 24 each		96
Six wards in first story, 20 each	120	
Four wards in first story, 24 each	96	
		216
Wards in second and third stories		432
In all		744

"The wards are all laid out upon a plan adopted by a commission in France, after an examination of the principal hospitals in Europe. It is proposed to adopt the general principle of ventilation of the Lariboisière Hospital of Paris, now considered the best in Europe. A general fresh air conductor, fed by a blower from a raised air chimney outside of the building, is carried underneath the basement floor. From this, vertical supply tubes, diminishing in area as they rise, distribute the fresh air in summer, and the heat of fresh air in the winter, to each ward, bath-room, and closet.

"The wards are supplied by horizontal tubes, with vertical pedestals; in each ward these pedestals are covered by perforated plates of metal. The foul air is conveyed from over every two beds of each ward by pipes of glazed earthenware, to the top of the wall, where they are conducted to the foul-air chimneys by tubes of metal. The circulation is produced by coils of steam pipes or stoves in the foul-air chimneys. The heavier gases are taken through openings made around the base of the rooms. It is proposed to force river and fresh water into tanks under the roof by the same engine which drives the blower, and to have hot and cold water tanks at regular distances over the water-closets and baths.

"The outside walls to be constructed of rubble-stone masonry, with hammer-dressed or pointed corners. The outside walls to have an eight inch air-space, and four inch inner or furring wall of brick inside of the interior stone-work."

Tonic Nutritive Wine.—There has recently been brought to the notice of the profession of this city a preparation, in which are combined quinquina and cocoa with Spanish wine. The advantages which it is claimed to possess are an agreeable tonic, combining the virtues of quinquina and wine. It is very highly commended by the leading physicians of Paris, by whom it is now extensively employed. The physicians of this city, who have used this wine, are unanimous in their approval of it. The following extract from *l'Union Médicale* in regard to this preparation will give a better idea of its merits:

"A good preparation of quinquina will forcibly address itself to the attention of the profession, inasmuch as quinquina is one of the medicaments whose employment is most frequently called for in the treatment of diseases. The new combination which we speak of has already been noticed in papers read before the Medical Societies; and some interesting observations upon it have appeared in the medical journals. For our part, having had numerous occasions in our private practice to observe the good effects of this preparation, we feel that it is no less than our duty to make known to our brethren the service it had done

for us and which it can do for them. There is no physician familiar with the difficulties of his profession, who does not feel that there is nothing more desirable than to encourage a most widely used pharmaceutical product which has at last been freed from its excessive bitterness. There are no inconsiderable details in medicine; the smallest improvement may lead to great results.

"At this period we are hardly permitted to prescribe, without unquestionable necessity, a medicament repulsive to the taste. The patient feels that he has enough with his sufferings, without the addition of the impression of pain created by those therapeutic agents whose ingestion is only made possible by an impatient and strong desire to be cured. By all means, the profession should seek to avoid the prescription of repulsive remedies, if they can replace them with preparations which the patient may take without repugnance. Medicine is constantly making progress in this direction, whose importance can be denied by no one, either in the interest of the physician or the patient.

"The *Vin Toni-Nutritif* agrees perfectly, in the extent of its properties, with this actual want. It is wine of quinquina, highly tonic and restorative, not only without bitterness, but even with an agreeable taste. It therefore readily recommends itself to children and to women who are brought with difficulty to take medicines of bitter taste.

"It is understood that this new product can be prescribed in all cases where preparations of quinquina are indicated as a tonic or febrifuge.

"We have ordered it for young children, debilitated by severe diseases, whose convalescence has been prolonged; these little patients have always taken it with pleasure and sometimes with avidity.

"In the treatment of chlorosis, we have combined it with ferruginous preparations. It was then much preferred to the ordinary quinquina wine.

"Uterine affections often require, during and after the local treatment, the use, more or less prolonged, of bitter agents, with the view to reëstablish the altered digestive functions, and to provoke, through a more thorough nutrition, the restoration of the general strength. In several cases of this kind, we have substituted the wine with quinquina and cocoa for bitters of various sorts which were taken with great repugnance; in every instance the wine was taken with pleasure, on account of its agreeable taste, while its favorable effects upon the system have been marked and decided."

Wood-cut Illustrations.—So frequently are medical men deterred from obtaining illustrations of interesting external diseases, or pathological specimens by the great expense and annoyance attending them, that we are constrained to call the attention of the profession to the method of photographing on wood as practised by Waters & Co., 90 Fulton street. By this process the impression is taken directly upon the wood, thus not only avoiding the expense of drawing, but insuring the greatest accuracy and the greatest dispatch in its execution. They will visit hospitals, or patients, to take their impressions if necessary.

For specimens of their work we may refer to the wood-cuts of this Journal for the last year.

Death of HENRY A. FORD, M.D.—At Baraka, Gaboon River, West Africa, Feb. 2. Dr. Ford was a native of the State of New York, and he was a graduate of the University Medical College in this city. He was a man of great energy and untiring industry, an accomplished and eminently successful physician. His professional career, though brief, has been one of great usefulness.

Dr. Ford went out to the western coast of Africa in the year 1850, to labor as a missionary physician in connection with the mission stations in the vicinity of the Gaboon—a wild, paludal region, where, of course, the material fevers of the coast are persistent and of a pernicious type.

In the treatment of those fevers he soon acquired a degree of skill, boldness, and experience that rendered his services invaluable to the foreign residents and visitors there. Some of the results of his observations and experience in that field were communicated to this Journal in an elaborate and practical paper on the Fevers of Africa. (See vol. XV., N. S.) That essay, with an addition of valuable suggestions to persons visiting the coast, has been republished, and it constitutes a little volume of great practical value to the foreigners who may visit or reside in that favorite haunt of fatal malaria.

Dr. Ford has also made some contributions to our knowledge of the natural history of equatorial Africa, among which may be seen in the Museum of the Academy of Natural History, at Philadelphia, a finely prepared skeleton of that rare and but recently discovered giant of the Simia—the *troglodytes gorilla*, or the "ugeni" But Dr. Ford's arduous duties did not allow him much time for the study of the natural history of the unexplored regions that he occasionally traversed, and whose virgin wilds were very attractive to him as a lover of nature.

This lamented and worthy physician performed an immense amount of labor in Africa, and by strict adherence to his own judicious rules of hygienic regimen, prophylaxis, and therapeia, he was enabled to enjoy in that insalubrious climate nearly seven years of remarkable health and vigor. But during the few weeks preceding his fatal illness, he had undertaken very arduous labors in the construction of an improved dwelling-house, which with the exposure and fatigue of a long journey into the interior in an open boat, added to the care of sick associates, prostrated his hitherto strong vital energies, and invited the fatal attack of malignant fever that terminated his life of noble Christian benevolence and usefulness. Truly did he say in his Essay on African Fevers—"*Eternal vigilance is the price of health in Africa.*"

YELLOW FEVER—QUARANTINE: *Destruction of the Quarantine Buildings by a Mob.*—The New York Quarantine—its uses, abuses, and the ruthless burning of all hospital and other buildings pertaining thereto, have suddenly become the exciting topics of the day. As this number of the Journal is going to press, the last combustible structure at Quarantine is being burned to the ground.

By these barbarous acts of incendiarism it is possible that the citizens of this metropolis, and the people of the State of New York, may be aroused to some proper sense of the importance and the practical bearings of the various and vexed questions relating to our Quarantine system. "It is an ill wind that blows no good," and if this daring act of the people of Staten Island could be the means of rectifying the abuses of Quarantine at this great entrepôt of American commerce, and could such riotous proceedings become the means of procuring the establishment of a rational and efficient *sanitary system* for the port and city of New York, this terrible experience were cheaply earned, though it is likely to cost the State nearly a half million dollars.

We have not time for comments on this unparalleled and inhuman firing of hospitals. With pain we have looked upon the strange scene of fever patients dragged forth from their comfortable wards and exposed without shelter in the open air, while the edifices which were erected for their benefit, and for the protection of community from infectious maladies were smouldering in ruins from the torch of American citizens. With shame for the medical profession, and humiliation for the boasted intelligence and social and civil superiority of the Empire State, are we compelled to acknowledge that these high-handed, unrestrained and unparalleled outrages against the laws and the dignity of the State are the direct result of the shameless prostitution of the most important responsibilities, executive and legislative to the basest purposes, while Legislators, Governors, and Boards of Health have found ample apology, and sheltered themselves behind the ignorance and dissensions of medical writers on infectious diseases and quarantine.

Difficult as it may be to determine certain questions relating to the sanitary protection of a great commercial city like New York, the time has come when our Quarantine regulations must be established upon some clearly defined and rational basis which will command the respect of the people, and *actually* guard the public from imported infection.

The events affecting the question of the imported origin of yellow fever in the port of New York, and in the vicinity of the Quarantine station, this season, as in past years, have been peculiarly definite and instructive. The cases in New York and Brooklyn, thus far, have occurred only in persons employed on the cargoes of vessels from infected ports, or in the work of cleansing and repairing such vessels.

On the eastern shore of Staten Island the infection of the fever is believed to have become localized at two or three distinct and widely separated points. Some twenty cases have occurred, and about one-third the number have died with black vomit.

The number of sick seamen admitted to the hospital from infected vessels has been unusually large, and several stevedores, shipkeepers, and other employees on such vessels in Quarantine, have been brought into the fever wards. The U. S. steamer "Susquehannah," which arrived with yellow fever from the Gulf of Mexico, early in the season, has visited death upon a large proportion of all unacclimated persons who have visited that vessel since her arrival; and other vessels, without cargo, have proved to be similarly infected.

No other port in the world presents equal facilities for the successful study of those laws that govern the great scourge of the American topics as a transportable infection. Here at the periphery of that variable zone, within which the infection of yellow fever may be reproduced and yield its fatal fruits, all the facts relating to introduction and diffusion among us are replete with interest, and from them may eventually be evolved the laws which govern the etiology of the disease that has baffled the closest study from the days of Chisholm, Rush, Pym, and Bayley.

The New Sydenham Society of London.—This Society was organized on the basis of the old Society which recently ceased to exist. The publications of the former Society, which embraced works inaccessible to the profession at large, form a series of great interest, both for their historical and practical value. The regret which was felt at the failure of this organization is relieved by the rise of this new Society, whose publications are to embrace a much larger number of works, and those of more recent date. Subscriptions are solicited in this city by Dr. Heywood, the local agent of the Society.

New Medical Periodicals.—*Journal of Physiology.*—We have received the first number of this Journal, edited by Dr. Brown-Séquard. It contains 214 pages, more than half of which are devoted to original memoirs. It fully sustains the high character which the name of its projector had led us to anticipate.

The Pacific Medical and Surgical Journal.—This is the title of a new and enterprising monthly Journal, edited and published by Drs. John B. Trask and David Wooster, of San Francisco, Cal. The first number was issued in January. It is well printed, expensively illustrated, and, in its literary character, does great credit to the profession of that State. Subscription price, $5 00 a year. It may be obtained of Baillière.

Oglethorpe Medical and Surgical Journal.—This is a new bi-monthly Journal, issued at Savannah, Ga., by Drs. H. L. Bird and Holmes Steele. It consists of 64 pages, and is afforded at $2 00 a year.

The Savannah Journal of Medicine.—This work is also a bi-monthly, of 72 pages, and is issued from the same city as the preceding Journal, and at the same price. It is under the editorial management of Drs. J. S. Sullivan and Juriah Harriss, with whom is associated Dr. R. D. Arnold.

Maine Medical and Surgical Reporter.—We have received the second number of this new medical periodical, published at Portland, Maine. It is to appear monthly, at $2 00 a year, each number containing 48 pages. It is under the editorial management of Drs. Cummings and Richardson.

Medical Journal of North Carolina.—This Journal appears under the auspices of the State Medical Society, edited by Dr. Edward Warren.

Medical Instruction in the City of New York.—As the season approaches for the annual influx of students to this city, we desire to call

attention to the announcement of the several schools in our advertising sheet. At no former time has this city offered greater inducements to medical students who are in pursuit of thorough didactic and clinical instruction.

PUBLICATIONS RECEIVED.

Bucknill (J. C.) and Luke (D. H.) A Manual of Psychological Medicine, containing the history, nosology, description, statistics, diagnosis, pathology, and treatment of Insanity. Philadelphia: Blanchard & Lea, 1858.

Lallemand (M.) A Practical Treatise on the Causes, Symptoms, and Treatment of Spermatorrhœa. Third American edition, to which is added, On Diseases of the Vesiculæ Seminales, and their associated Organs. By Morris Wilson, M.D. Philadelphia: Blanchard & Lea, 1858.

Morris (Caspar) An Essay on the Pathology and Therapeutics of Scarlet Fever. Philadelphia: Lindsay & Blakiston, 1858.

The Uræmic Convulsions of Pregnancy, Parturition, and Childbed. By Dr. Carl R. Braun, Professor of Midwifery. Vienna: Translated from the German, with notes, by J. Mathews Duncan, F.R.C.P.E., Lecturer on Midwifery. New York: S. S. & W. Wood, 389 Broadway, 1858.

Report of a Committee on Dr. Lovejoy's alleged New Remedies. Published by vote of the Monroe Co. Medical Society, Rochester, June 9, 1858. [*Dr. Lovejoy, a member of the Monroe Co. Med. Soc., issued a circular claiming to have discovered certain new remedies, which were proved by this Committee's investigations to be worthless or well known compounds. They very properly condemn the author for holding a proprietorship in remedies.*]

Proceedings of the Sixty-sixth Annual Convention of the Conn. Medical Society, May 1858, with a list of members. [*This volume contains the address of the President*, DR. CATLIN; *reports of several committees; and papers on puerperal Convulsions by Dr. Lindsley; A sketch of Human Embryology, by Dr. C. L. Ives; The Surgical diseases of the Rectum. by Dr. L. S. Paddock; with biographical notices of Drs. Wm. C. Williams and John S. Peters.*]

Annual report of the Secretary of State in relation to the statistics of the poor, made February 1, 1858. [*This is a valuable statistical document, which should have a wide circulation among tax-payers.*]

Transactions of the Twenty-ninth Annual meeting of the Tennessee State Medical Society, held at Nashville, April 6, 1858. [*This volume contains, in addition to the proceedings of the Society, the following papers: How does chloroform cause death? by Dr. T. L. Maddin; Account of a patient who swallowed a set of artificial teeth, by Prof. Eve; Case of disease of the cerebro-spinal centres, characterized by constant hiccough, followed by death. by Dr. L. M. Woodson; Obstetric Medicine, by Dr. W. P. Moore; Traumatic tetanus, treated with opium, by Dr. C. K. Winston.*]

On the comparative use of the Ergot and the Forceps in labor. By B. Fordyce Barker, M.D., 1858.

Nineteeth Annual Report of the Board of Trustees and Officers of the Central Ohio Lunatic Asylum, to the Governor of Ohio, for the year 1857. Columbus: 1858.

Cheoplastic Process, an Improvement in Mechanical Dentistry.

The Physician's Hand-Book of Practice and Memoranda for 1858. By Wm. Elmer, M.D., and Levi Ruben, M.D. New York: Stringer & Townsend. 1858.

Essays on the Secretory. and the Excito-Secretory system of Nerves, in their relations to Physiology and Pathology. By Henry Fraser Campbell, M.D. Philadelphia: J. B. Lippincott & Co., 1857.

Twenty-first Annual Report of the Trustees and Superintendent of the Vermont Asylum for the Insane, August, 1857.

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The Publisher of the "New York Journal of Medicine" respectfully informs the subscribers who are in ARREARS of payment for TWO YEARS or over, that he purposes DRAWING ON THEM AT SIGHT FOR THE AMOUNT, on the 15th instant. He begs that they will make arrangements to meet the Draft and save him further expense. He thinks it unnecessary to inform the persons to whom the above has reference, as numerous applications for payment, in such cases, have already been made.

He begs also to inform those members of the Profession to whom the Journal has been sent up to the present time, and who do not support it by paying up, that he has no desire to force his Journal on them, and that henceforth it will not be supplied unless the subscription is received in advance.